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¹ ECF No. 170.

UNITED STATES DISTRICT COURT EASTERN DISTRICT OF WASHINGTON

Plaintiff,

and

STATE OF OREGON,

STATE OF WASHINGTON,

Plaintiff-Intervenor,

V.

ERNEST MONIZ, Secretary of the United States Department of Energy, and the UNITED STATES DEPARTMENT OF ENERGY,

Defendants.

NO: 2:08-CV-5085-RMP

THIRD ORDER REGARDING MOTIONS TO MODIFY CONSENT DECREES

BEFORE THE COURT are three Motions to Amend Consent Decrees filed respectively by Washington State, Oregon State, and the United States Department of Energy. **ECF Nos. 75, 99, and 76**. Pursuant to this Court's Second Order Regarding Motions to Modify Consent Decrees, Washington, Oregon, and the Department of Energy each have filed Second Consent Decree Modification

Proposals. ECF Nos. 198, 197, and 196. The Court has reviewed the parties' proposed modifications, supporting documents, memoranda in response (ECF Nos. 207, 208, and 209), and is fully informed.

INTRODUCTION

This Order concerns the mutual agreements between the United States

Department of Energy ("DOE"), Washington State, and Oregon State regarding the safe removal of radioactive waste from the Hanford Nuclear Reservation

("Hanford") in a reasonable and expeditious manner.²

In 2008, Washington filed a lawsuit against DOE regarding the clean-up of radioactive waste stored at Hanford. Oregon intervened and filed a similar complaint in 2009. In 2010, the parties entered into two Consent Decrees, one between Washington and DOE and the other between Oregon and DOE. DOE agreed to an established schedule of milestones for constructing a waste treatment plant and retrieving radioactive waste from specified storage tanks. The Consent Decrees also established a series of reporting requirements designed to ensure accountability of DOE's progress and delays. Unfortunately, due to a variety of

² This brief summary is based on the Court's prior orders and the parties' pleadings, all of which are referenced in the Court's prior orders.

factors, DOE has been unable to satisfy its previously agreed-upon obligations under the Consent Decree³ milestone schedules.

Washington and Oregon allege that DOE has disregarded the mandatory reporting obligations, leaving Washington and Oregon uninformed concerning DOE's progress towards resolving problems associated with attaining the ultimate goals under the Consent Decree. A variety of DOE's unilateral actions, including ceasing construction of the Waste Treatment Plant ("WTP") and failing to reasonably adhere to the mandatory reporting requirements, have resulted in the motions before the Court.

Following a preliminary round of briefing as discussed below, all parties petitioned the Court to modify the Consent Decrees to establish amended, attainable schedules for both WTP construction and the retrieval of nineteen single-shell tanks ("SSTs") as well as implementing enhanced reporting requirements to increase DOE's accountability.⁴

As noted in the Court's prior Orders, controlling law mandates that any modification of the Consent Decrees must be "suitably tailored" to "resolve the problems created by the change in circumstances" which brought the parties before

³ Any reference in this Order to the "Consent Decree" refers to the Consent Decree between Washington State and DOE, unless the Court specifies otherwise.

⁴ See ECF Nos. 75, 76, 99, 196, 197, and 198.

 5 See Rufo v. Inmates of the Suffolk Cnty. Jail, 502 U.S. 367, 391 (1992).

⁶ ECF No. 59 at 2; ECF No. 60 at 2.

the Court.⁵ Consequently, the Court cannot re-negotiate the parties' underlying agreements, and is instead constrained to establishing reasonable, attainable solutions designed to resolve the parties' disputes and set the Hanford Site cleanup back on schedule.

A primary goal of the Consent Decrees was to satisfy the "wish to resolve this action without litigation." Having reviewed the parties' disputes in detail, the Court concludes that a significant portion of the Consent Decrees' value has been undermined by the insertion of litigation tactics, such as insistence that DOE's reports to Washington and Oregon be shielded by Federal Rule of Evidence 408, in spite of DOE's express agreement to the reporting requirements in the original Consent Decrees.

Reporting is essential to inform Washington and Oregon of DOE's progress and delay, to maintain DOE's accountability, and to facilitate cooperation between DOE, Washington, and Oregon to protect the public and the environment. For example, if reporting had occurred as required by the Consent Decrees, Washington and Oregon would have had sufficient notice of the extent of DOE's funding issues to be able to assist DOE by engaging with the legislature through the political process to obtain additional funds for the Hanford Site.

As Washington has argued, time is of the essence in this matter. It is uncontested that radioactive waste is leaking into the environment. The passage of time and the urgency of waste clean-up are inextricably linked: the longer that DOE takes to satisfy its obligations under the Consent Decree the greater the likelihood of irreversible damage to the environment.

As in the original Consent Decree, the Court included milestone schedules that serve as benchmarks of DOE's progress. These milestones should be viewed as enforceable legal duties rather than optimal, idealistic goals. It is in the best interests of all the parties, as well as the public, to accomplish the Consent Decree goals in an expeditious manner, preferably before the actual milestone schedule dates.

This case is not typical litigation involving ordinary legal disputes. At the parties' request, the Court is modifying consent decrees that the parties voluntarily entered into six years earlier. No party can "win" this litigation. The public and environment only can "lose" as more time passes without an operational solution to the radioactive waste problems at the Hanford Site.

⁷ See ECF No. 84 at 8 ("All 149 SSTs have been identified to the State as 'unfit for use' through an engineering assessment conducted by Energy.").

⁸ See ECF No. 59 at 4 ("Each milestone set forth in Appendix A shall be completed by the specified date for that milestone in Appendix A.").

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The Court trusts that the parties will act in good faith to both achieve the milestones and comply with the reporting requirements established in the Amended Consent Decrees, instead of obfuscating issues with litigation tactics. The parties should expend their limited resources on cooperative efforts to serve the public's best interest and achieve the common goals enshrined in the Consent Decrees.

A primary issue confronted by the Court throughout the Consent Decree modification process has been the irreconcilable tension between the restrictive legal standards governing the Court's involvement in consent decree modification and the reality of establishing a schedule, projected to cover decades, governing an evolving scientific process. The Court is aware that many of the parties' underlying assumptions have shifted since the Consent Decrees were entered in 2010; that technology has changed in the intervening years; and that all parties have requested modifications that are outside the scope of the Court's authority under Rufo. 9 The restrictive legal process governing consent decree modification does not permit the Court to freely alter the Consent Decrees to incorporate new technology, such as a direct feed approach to waste vitrification. However, the parties are free to stipulate to Consent Decree modifications themselves, or to enter into a new consent decree drafted to account for new or different technological approaches. The Court notes that Congress is addressing the difficulties facing courts in

⁹ See ECF Nos. 139 and 170.

¹¹ ECF No. 139.

modifying consent decrees, like the Hanford Consent Decrees, governing dynamic and evolving projects. ¹⁰

The Court encourages the parties to take whatever means necessary, including adopting newly developed technology, to effectuate clean-up at the Hanford Site. However, the Court is constrained by law only to modify these Consent Decrees based on the parties' original agreements.

BACKGROUND

A detailed statement of the factual and procedural background of this case is set out in the Court's first Order Regarding Motions to Amend Consent Decrees. ¹¹ For the purpose of this Order, the Court will include a brief factual and procedural summary with limited citations to the record.

¹⁰ See Sunshine for Regulations and Regulatory Decrees and Settlements Act of 2016, H.R. 712, 114th Cong. § 104 (as passed by House of Representatives Jan. 7, 2016) ("If an agency moves a court to modify a covered consent decree or settlement agreement and the basis of the motion is that the terms of the covered consent decree or settlement agreement are no longer fully in the public interest due to the obligations of the agency to fulfill other duties or due to changed facts and circumstances, the court shall review the motion and covered consent decree or settlement agreement de novo.").

I. The Hanford Federal Facility Agreement and Consent Order

In 1989, DOE, Washington, and the Environmental Protection Agency entered into the Hanford Federal Facility Agreement and Consent Order, or Tri-Party Agreement ("HFFACO"), "to promote an orderly and effective cleanup of contamination at Hanford and to ensure compliance with [the Resource Conservation and Recovery Act] and the [Hazardous Waste Management Act]." ¹² The HFFACO is a legally-enforceable agreement containing numerous milestones for clean-up of the Hanford Site, many of which pertain to the treatment and prolonged storage of radioactive tank waste. The HFFACO already had been entered when the Federal Facilities Compliance Act was enacted and it "satisfied the requirement of a site treatment plan under 42 U.S.C. § 6939c(b)(1)(A)(ii)." ¹³

II. The Consent Decrees

In November of 2008, Washington filed a complaint against DOE alleging that DOE had "failed to meet certain key compliance milestones" contained in the HFFACO. ¹⁴ Specifically, Washington alleged that DOE had failed to meet or was "certain to miss" ten milestone deadlines, seven pertaining to tank waste treatment

¹² ECF No. 76 at 10; HFFACO, available at http://www.hanford.gov/page.cfm/TriParty.

¹³ Washington v. Chu, 558 F.3d 1036, 1041 (9th Cir. 2009).

¹⁴ ECF No. 1.

and three pertaining to tank waste retrieval. ¹⁵ Oregon intervened in Washington's lawsuit against DOE in 2009. ¹⁶ Oregon's interest in the suit stems from the effects that Hanford's waste has, or may have, on the Columbia River, which flows through Oregon less than fifty miles after passing through Hanford before continuing for more than 200 miles along Oregon's northern border into the Pacific Ocean. ¹⁷ In 2010, the parties entered into two Consent Decrees as described above: one between Washington State and DOE and the other between Oregon State and

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III. Procedural History

Almost immediately after the Consent Decree was entered, DOE gave Washington notice that one or more of the Consent Decree milestones was "at risk" of being missed. ¹⁹ Despite attempts to negotiate modifications, the parties have been unable to reach agreement on amendment proposals and independently petitioned the Court for modification of the Consent Decrees.

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¹⁵ *Id.* at 2–3.

¹⁶ ECF No. 35.

¹⁷ ECF No. 99 at 5.

¹⁸ See ECF Nos. 59, 60.

¹⁹ ECF No. 82-1.

A. First Order Regarding Motions to Amend Consent Decrees

In the Court's first Order Regarding Motions to Amend Consent Decrees, the Court articulated the standard governing modification of a consent decree. The party seeking modification of a consent decree bears the burden of demonstrating the following four elements: (1) that "a significant change either in factual conditions or in the law occurred after execution of the decree"; (2) that "the change was not anticipated at the time it entered into the decree"; (3) that "the changed factual circumstance makes compliance with the consent decree more onerous, unworkable, or detrimental to the public interest"; and (4) that the proposed modification is "suitably tailored to resolve the problems created by the changed . . . conditions." ²⁰

1. Changed Conditions Concerning the Waste Treatment Plant

The Court recognized that several factual conditions concerning the WTP had changed since the Consent Decrees were entered. Specifically, the Court recognized the following changed conditions: (1) the extent of DOE's failure to comply with the Consent Decree terms; (2) DOE's unilateral decision to cease construction of the WTP; and (3) a leak in a double-shell tank ("DST").

 ²⁰ Labor/Cmty. Strategy Ctr. v. L.A. Cty. Metro. Transp. Auth., 564 F.3d 1115,
 1120 (9th Cir. 2009) (quoting United States v. Asarco, Inc., 430 F.3d 972, 979 (9th Cir. 2005)); Rufo, 502 U.S. at 383–93.

The Court also recognized the following five unresolved technical issues identified during WTP development as bases for modifying the Consent Decree provisions pertaining to WTP construction: (1) preventing potential hydrogen build-up; (2) preventing criticality; (3) ensuring control of the pulse jet mixers; (4) protecting against possible erosion and corrosion; and (5) ensuring ventilation balancing.

2. Changed Conditions Concerning Single Shell Tank Retrieval

Concerning the retrieval of the nineteen SSTs, the Court recognized the following changed circumstances: (1) funding and manpower shortages caused by sequestration and furlough; (2) a new technical concern over the accumulation of sludge above a certain height in the DSTs;²¹ and (3) delay caused by the failure of sluicing equipment installed by DOE to retrieve SST C-111.

B. Second Order Regarding Motions to Modify Consent Decrees

In the Court's Second Order Regarding Motions to Modify Consent Decrees, the Court considered whether the parties' proposed modifications were "suitably tailored" to resolve the changed circumstances recognized by the Court.

²¹ Some amount of DST space is required to facilitate retrieval of the nineteen SSTs. ECF No. 84 at 10 (noting that DSTs "serve as transitional storage capacity—waste retrieved from the SST system is transferred to the DST system, then stored until the Waste Treatment Plant becomes operational").

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A consent decree modification should "retain the essential features and further the primary goals" of the decree. ²² Accordingly, the Court identified the following three performance objectives as the "primary goals" of the Consent Decree: (1) constructing and achieving initial operation of the WTP; (2) retrieving nineteen SSTs; and (3) holding DOE accountable by requiring reporting on DOE's progress or delays in achieving the first two objectives. The Court identified the "primary goal" of the Consent Decree between DOE and Oregon as the same accountability and reporting objective which comprises the third goal of the Consent Decree between DOE and Washington.

The Court found that the various changed circumstances noted above have impaired DOE's ability to adhere to the Consent Decree milestone schedule. The Court determined that the current Consent Decree schedule is unworkable or overly onerous, and must be modified in order to be realistically attainable. The Court also concluded that DOE's noncompliance with the current reporting requirements demonstrates that the current Consent Decrees are insufficient to achieve the third objective of holding DOE accountable. Therefore, the Court found that "any modification to the Decrees must be suitably tailored to create a new, attainable schedule that will hold DOE accountable to constructing the WTP and retrieving nineteen SSTs."

²² Keith v. Volpe, 784 F.2d 1457, 1460 (9th Cir. 1986).

1	The Court, pursuant to the limited role granted a modifying court under
2	Rufo, declined to incorporate a number of new performance obligations into the
3	Amended Consent Decree, including a Direct Feed Low Activity Waste ("LAW")
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system, ²³ a Direct Feed High-Level Waste ("HLW") system, ²⁴ and the immediate

construction of new DSTs. 25

²³ Direct Feed LAW would require DOE to "build another pretreatment facility,	
specifically for LAW, which would be used in lieu of the Pretreatment System, at	
least until the Pretreatment System is constructed and operating. Thus, instead of	
waiting for all five facilities to begin operating simultaneously, DOE would be able	
to feed LAW directly into the LAW Pretreatment Facility, and then into the LAW	
Facility, enabling LAW to be treated as soon as these facilities are constructed."	
ECF No. 170 at 8. The Court previously determined that "[t]he Court will not	
prohibit DOE from moving forward with the Direct Feed LAW approach at this	
time; the Court simply declines to modify the Consent Decree to include	
milestones in this Consent Decree for achieving that objective." <i>Id.</i> at 21.	
²⁴ Direct Feed HLW is a "possible solution for processing waste from certain tanks	
containing plutonium or other materials that could pose challenges for the	
Pretreatment Facility." ECF No. 106-5 at 11. The Court rejected the	
implementation of Direct Feed HLW in the Amended Consent Decree "[f]or the	
same reasons that the Court has rejected the parties' Direct Feed LAW approach."	
ECF No. 170 at 21.	
²⁵ The Court declined to immediately order the construction of new DSTs as	
"[c]ourts are reluctant to impose new obligations on a defendant beyond those	
THIRD ORDER REGARDING MOTIONS TO MODIFY CONSENT DECREES~14	

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The Court ordered the parties to submit new modification proposals in response to the Court's prior orders. Those revised proposals, ECF Nos. 196, 197, and 198, as well as the parties' response memoranda, ECF Nos. 207, 208, and 209, are the focus of the current "Third Order Regarding Motions to Modify Consent Decrees." Decrees." 26

required by the terms of the original decree." ECF No. 170 at 25. However, as discussed below, the Court will "modify the Consent Decree to require DOE to construct additional DSTs contingent on DOE's failure to achieve certain SST retrieval milestones." Id. at 27. The Court justified this finding as "the Court does have authority to modify a consent decree to resolve problems created by changed circumstances," and "[i]f the Evaporator fails to prove as successful as DOE represents . . . the Court would be acting within its authority to require DOE to build additional DSTs to provide sufficient storage space for the waste retrieved from the nineteen SSTs, an express objective of the Consent Decree." Id. ²⁶ To assist the Court in resolving conflicting proposals in this highly technical field, the Court convened a panel of three technical advisors proposed by the parties. ECF No. 206. The Court met with the technical advisor panel on February 8, 2016. Pursuant to the Court's instructions, the technical advisors assisted the Court in organizing and understanding the relevant scientific evidence by

DISCUSSION

I. WASTE TREATMENT PLANT

DOE will remove radioactive and hazardous wastes from the current tank farms at Hanford and use the Waste Treatment Plant ("WTP") to transform the waste into a stable glass form for disposal, using a process called vitrification. ²⁷ Under the Consent Decree, five separate construction subprojects will comprise the WTP: (1) the Pretreatment Facility ("PT"); (2) the Low-Activity Waste Facility ("LAW"); (3) the High-Level Waste Facility ("HLW"); (4) the Analytical Laboratory ("LAB"); and (5) the Balance of Facilities. ²⁸ As envisioned in the original Consent Decree, all five components would need to be operational before the WTP could process any tank waste. ²⁹

At present, construction work of the PT is suspended until outstanding technical issues are resolved. ³⁰ Structural work is ongoing at the HLW, although construction work is suspended in areas of the facility potentially affected by

providing analytical frameworks through which to approach the various engineering and project management issues. ECF No. 192.

²⁷ ECF No. 76-2 at 6.

²⁸ *Id*.

²⁹ *Id.* at 6–8.

³⁰ ECF No. 196-2 at 2.

erosion/corrosion and ventilation issues.³¹ LAW construction work is continuing,³² and DOE represents that the LAB has been substantially constructed.³³

The original Consent Decree contained nineteen scheduling milestones designed to gauge DOE's progress while constructing the various WTP subcomponents, culminating in commencing initial WTP operations. ³⁴ These milestones, enumerated in Appendix A, were each assigned a project designation, A-1 through A-21. ³⁵ Throughout this Order, the Court will refer to milestones by both their project designation code as well as the parties' project description.

 $^{^{31}}$ *Id.* at 2–3.

³² *Id.* at 3.

³³ ECF No. 196-1 at 2.

³⁴ See ECF No. 59 at 28–29.

³⁵ Appendix A, although containing nineteen milestones, omits interim milestones designated A-10 and A-11.

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Regarding the HLW, DOE was to have substantially completed³⁶ construction by December 31, 2016; started cold commissioning ³⁷ by June 30, 2018; and completed hot commissioning³⁸ by December 31, 2019.³⁹

Regarding the LAB, DOE was to have substantially completed construction by December 31, 2012, and completed methods validations by December 31, 2017.40

³⁶ "Substantially complete" means that the Start-Up Organization has certified the facility and its subsystems are ready to be turned over to the Start-Up Organization. ECF No. 59 at 28.

³⁷ "Start Cold Commissioning" means the introduction of feed simulants for the purpose of determining individual facility functionality. Id. at 29.

³⁸ "HLW Facility Hot Commissioning Complete" means the point at which the HLW facility has demonstrated its ability to produce immobilized HLW glass of acceptable quality. Id.

³⁹ *Id.* at 27.

⁴⁰ *Id*.

Regarding the LAW, DOE was to have substantially completed construction by December 31, 2014; started cold commissioning by December 31, 2018; and completed hot commissioning 41 by December 31, 2019. 42

Regarding the PT, DOE was to have substantially completed construction by December 31, 2017; started cold commissioning by December 31, 2018; and completed hot commissioning ⁴³ by December 31, 2019. ⁴⁴

As of the current date, DOE has satisfied the following scheduling milestones: LAB Construction Substantially Complete (A-5), Steam Plant Construction Complete (A-12), Complete Structural Steel Erection Below Elevation 56' in PT Facility (A-18), Complete Construction of Structural Steel to

⁴¹ "LAW Facility Hot Commissioning Complete" means the point at which the LAW facility has demonstrated its ability to produce immobilized LAW glass of acceptable quality. *Id.* at 29.

⁴² *Id.* at 27.

⁴³ "PT Facility Hot Commissioning Complete" means the point at which the PT facility has demonstrated its ability to separate liquids from solids using radioactive materials to produce acceptable feed for high level waste (HLW) and low-activity waste (LAW) glass production. *Id.* at 29.

Elevation 14' in HLW Facility (A-20), and Complete Construction of Structural Steel to Elevation 37' in HLW Facility (A-21). 45

The Court will not modify the Consent Decree to impose new milestone deadlines for the completed, or substantially completed, projects. However, having previously identified "changed conditions" that have made the remaining WTP operational milestones "unworkable or substantially more onerous," ⁴⁶ the Court has implemented an amended schedule that is based on the parties' proposed modifications and that is "suitably tailored" to constructing the WTP in a timely, yet feasible, manner.

A. Feasibility of Enforceable Milestones

1. DOE Proposal

Despite having agreed in the original Consent Decree to firm milestones,
DOE now re-asserts that DOE "continues to believe that milestones for the WTP
must be established only after critical information is developed concerning" the
resolution of the five outstanding technical issues, facility redesign, and the
development of new performance baselines. ⁴⁷ DOE has proposed a semi-automatic
milestone extension mechanism on the basis that "notwithstanding DOE's best
efforts to develop and comply with milestones, DOE cannot in good faith attest

⁴⁵ ECF No. 196-1 at 2-3.

⁴⁶ ECF No. 170 at 7.

⁴⁷ ECF No. 196-2 at 5.

that the milestones in its second proposal—were they adopted without a mechanism for extension—would reflect an informed or reasonable path."⁴⁸

2. Washington Proposal

Washington argues that the Court should reject DOE's attempt to re-litigate the milestones issue that the Court previously had decided.⁴⁹

3. Analysis

The Court already addressed and rejected DOE's proposed phased approach to establishing milestones in its previous order. As noted by the Court, "[a] Consent Decree modification that lacks predetermined enforceable deadlines undermines the purpose of the Consent Decree." The Court again rejects DOE's proposal of sliding milestones and will impose an enforceable milestone schedule designed to track DOE's progress in constructing an operational WTP. As envisioned in the original Consent Decree, milestones serve as a tool to hold DOE accountable.

B. Number of Milestones

1. Washington Proposal

Washington proposes "thirty-five specific requirements for a step-by-step schedule for the construction and operation of the full WTP and its four

⁴⁸ *Id.* at 15.

⁴⁹ ECF No. 208 at 3 (citing ECF No. 170 at 14).

⁵⁰ ECF No. 170 at 14.

facilities/processes."⁵¹ Washington argues that the thirty-five steps add enforceable milestones addressing resolution of the outstanding technical issues, construction, and commissioning for each facility, as well as initial operations of the WTP as a whole. ⁵² Washington also proposes "semi-annual construction milestones for each facility," to be determined once DOE begins construction. ⁵³ Washington justifies its more detailed, step-by-step milestone schedule "to build accountability around, and closely track, Energy's course and progress in resolving the key technical

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2. DOE Proposal

issues that have derailed the WTP."54

DOE objects that Washington "has neither alleged nor demonstrated any, let alone relevant, problems with the breadth of the existing 14 WTP construction milestones." DOE contends that "dozens of rigid construction milestones would result in further delays by tying DOE's hands even where a different construction approach is more efficient." ⁵⁶

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 $21 \parallel_{56} Id. \text{ at } 7.$

⁵¹ ECF No. 198 at 4.

⁵² *Id*.

⁵³ *Id.*

⁵⁴ *Id.* at 5.

⁵⁵ ECF No. 209 at 2.

3. Analysis

The Consent Decree included nineteen milestones related to WTP construction and startup, of which fourteen remain to be completed.⁵⁷ As previously noted by the Court, "[a] consent decree modification should 'retain the essential features'" of the original decree.⁵⁸ The Court finds that, in the spirit of retaining the core structure of the Consent Decree, it would be inappropriate to impose milestones beyond the nineteen included in the original Consent Decree.

Although the Court is cognizant of Washington's argument that additional milestones would increase accountability, the Court will not restrict DOE's flexibility to appropriate resources in the most efficient and technologically prudent manner, such as constructing and incorporating a direct feed approach for both the LAW and HLW. The Court has considered Washington's proposed milestones in crafting the overall WTP timetable, but the Court will not impose additional enforceable WTP scheduling milestones beyond those included in the original Consent Decree. Therefore, the Court will maintain the original structure of Appendix A and modify only the fourteen outstanding scheduling milestones that have become unworkable.

⁵⁷ ECF No. 59 at 27–28; ECF No. 196-1 at 2–3.

⁵⁸ ECF No. 170 at 4 (quoting *Keith*, 784 F.2d at 1460).

C. High Level Waste and Pretreatment Facilities

As discussed above, HLW and PT construction currently is stalled by the five unresolved technical issues.⁵⁹ As the HLW and PT must undergo a similar process of technical issue resolution, facility redesign, and re-baselining prior to construction, the Court will apply similar analyses to establish modified scheduling milestones for both facilities. Further, as the HLW and PT are linked by the requirement of an operational PT in order to commission the HLW, this approach is technologically sound.⁶⁰

1. Construction Substantially Complete

As discussed above, the Court has maintained the scheduling structure of the original Consent Decree. Consequently, the Court established "suitably tailored"

⁵⁹ *See* ECF No. 196 at 6 ("Until the five primary technical issues affecting the HLW and PT Facilities are resolved . . . DOE cannot complete and verify the updated WTP design, or develop new or modified performance baselines and contracts to define and direct the execution of that design."); ECF No. 198 at 7 ("Washington's approach first allows Energy reasonable timeframes for resolving the major technical issues associated with the Pretreatment and High Level Waste Facilities.").

⁶⁰ See ECF No. 198 at 10 ("Commissioning periods for all three facilities are set to align with the PT Facility, which will feed waste to the other two.").

modified milestones for A-2 and A-14, setting deadlines by which DOE will have, respectively, completed substantial construction of the HLW and PT. Milestones A-2 and A-14, in order to be "suitably tailored," must account for the time required to resolve the five outstanding technical issues, facility redesign, and the development of new performance baselines, as well as construction. Therefore, the Court will analyze each facet, ultimately establishing reasonable, attainable

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a. Technical Issue Resolution

i. DOE Proposal

milestones within which DOE must construct the HLW and PT.

DOE "assumes that technical issue resolution will be completed on June 30, 2019." This projection is based "on the present progress of efforts to resolve the primary technical issues." The June 30, 2019, "date assumes that technical issues will be favorably and completely resolved through the current testing or modeling approaches, along with a small amount of contingency built in to account for the possibility of minor re-testing or other limited follow-on work."

Although DOE assumes a June 30, 2019, completion date, it simultaneously objects to enforceable milestones because they do not take into account funding

⁶¹ See ECF No. 59 at 27.

⁶² ECF No. 196 at 10.

⁶³ *Id*.

⁶⁴ ECF No. 196-2 at 21.

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and technological realities. 65 Further, DOE contends that there is "substantial uncertainty that remains with respect to technical issue resolution."66 DOE also argues that its June 30, 2019, assumed date for technical issue resolution "includes only a very limited buffer and is otherwise the minimum time necessary to complete resolution."67 DOE asserts that an additional buffer period should be included "to account for the broader scientific and engineering uncertainties." 68

ii. Washington Proposal

Washington contends that it "has conservatively provided a five-year timeframe within which to resolve the major technical issues" relating to the PT.⁶⁹ Under Washington's proposal, the technical issues related to the PT will be resolved by September 30, 2019.70 For the HLW, Washington has proposed a fouryear timeframe within which to resolve the major technical issues, with a projected

⁶⁵ ECF No. 209 at 5.

⁶⁶ Id.; see also ECF No. 209-1 at 6 (noting that "setting a milestone for resolution of technical issues is contrary to the nature of the resolution process, which is an iterative and evolving scientific analysis").

⁶⁷ ECF No. 209-1 at 11.

⁶⁸ *Id*.

⁶⁹ ECF No. 198 at 7.

⁷⁰ *Id.* at 8.

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resolution date of September 30, 2018.71 Washington calculated their proposed milestones "based on the information in the design and operability review and the technical resolution plans."⁷²

Washington argues that while DOE's timetable is built around a "host[] of reasons . . . why things *might* go wrong and lead to further delay," Washington's timeframe is premised on "reasonable assumptions of what can be achieved." 73 Washington reiterates that, should the technical issues take longer to resolve, the proposed milestones "could be extended under the Consent Decree's 'good cause' provision."74

Analysis iii.

Although in its reply memorandum DOE altered its original projected date of June 30, 2019, the parties essentially agree concerning the timeframe necessary to resolve the outstanding HLW and PT technical issues. Therefore, for the purpose of modifying the milestones for HLW and PT construction, the Court will assume that the current technical issues for both facilities will be resolved by December 31, 2019. This date is based on both parties' proposals, with an additional buffer added for any unexpected technological challenges.

⁷¹ *Id.* at 8–9.

⁷² ECF No. 198-2 at 12, 16–17.

⁷³ ECF No. 208 at 16–17 (emphasis in original).

⁷⁴ ECF No. 208-1 at 2 (citing ECF No. 59 at 12–14).

DOE expresses concern about the inflexibility of milestones and contends that the current modification procedure is inadequate as "identified uncertainties may not later serve as a basis for an extension under this Court's application of Rufo."75 However, the parties do not need to petition the Court to apply the Rufo standards for modification of the Consent Decree. Section VII(D) of the original Consent Decree explicitly states that the parties can modify the Consent Decree when "good cause" exists, such as when the schedule cannot be met due to circumstances or events "anticipated in the development of the schedule, but which have a greater impact on the schedule than was predicted or assumed at the time the schedule was developed."⁷⁶ Therefore, DOE may invoke the Section VII(D) "good cause" amendment process to seek extensions or modifications, which provides DOE's desired flexibility while still holding DOE accountable to an enforceable schedule.

The Court already has endorsed Section VII(D) as being "consistent with Supreme Court and Ninth Circuit law governing the modification of consent decrees." For instance, should the Court's assumptions that the outstanding

⁷⁵ ECF No. 196 at 16 (citing ECF No. 139 at 21 ("However, if the change was actually anticipated when the decree was entered, then ordinarily, modification is not warranted.")).

⁷⁶ ECF No. 59 at 13.

⁷⁷ ECF No. 139 at 19

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technical issues will be resolved by December 31, 2019, prove unattainable or unrealistic in light of future developments, DOE may, if it can demonstrate "good cause," invoke the amendment process under Section VII(D) and seek an extension.⁷⁸

b. Facility Redesign

Following resolution of the outstanding technical issues, the PT and HLW must undergo an unspecified amount of facility redesign. ⁷⁹ As noted by DOE, "[r]edesigning these facilities . . . may require altering designs for equipment, components, or processes, with any changes verified to ensure that they still meet DOE's extensive quality assurance." ⁸⁰

⁷⁸ The Court notes that DOE's argument also may be mooted by pending legislation. *See* Sunshine for Regulations and Regulatory Decrees and Settlements Act of 2016, H.R. 712, 114th Cong. § 104 (as passed by House of Representatives Jan. 7, 2016).

⁷⁹ ECF No. 196 at 6.

⁸⁰ *Id.* at 7.

i. DOE Proposal

Regarding the HLW, DOE assumes that facility redesign will be completed on December 31, 2021. 81 Regarding the PT, DOE assumes that facility redesign will be completed on December 31, 2024. 82

DOE states that "like issue resolution, the design and verification processes are iterative, scientific processes that must continue until a safe and effective solution is found." BOE's assumed dates for completing facility redesign are premised on "present and historical funding levels." As a component of funding, DOE has incorporated the goal of achieving operational Direct Feed LAW by 2022 into the assumed completion dates for redesign. As such, DOE has assumed that "less funding will be available to advance design and construction of the [HLW] and [PT] in the early years."

⁸¹ *Id.* at 10.

⁸² *Id*.

⁸³ ECF No. 196-2 at 8.

⁸⁴ *Id.* at 19.

⁸⁵ *Id*.

⁸⁶ *Id.* at 19–20.

DOE reiterates that "[t]hese timeframes are difficult to predict . . . because the full scope of the work to be done will not be known until after issue resolution is complete." Thus,

DOE based its assumptions on its professional judgment that facility redesign would take a minimum of two years after the resolution of technical issues, plus some additional time to account for the likelihood of a more-complicated-than-average redesign at the [HLW], and a significantly more-complicated-than-average redesign at the [PT]. 88

DOE's assumed dates also reflect "funding constraints and sequencing expectations" and the "fact that redesign will begin at the [HLW] first, with work at the [PT] starting more slowly and ramping up as redesign at the [HLW] reaches completion." Further, DOE notes that "the two-year assumption for redesign does not account for the time that may be necessary to perform further issue resolution and additional rounds of redesign activities." ⁹⁰

ii. Washington Proposal

Washington has proposed completion dates for the facility redesign of the HLW and PT. Regarding the HLW, Washington estimates that facility redesign will take one year, concluding in September 2019. 91 Washington assumes that,

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<sup>87</sup> Id. at 22.
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⁸⁸ *Id.* at 23.

⁸⁹ *Id*.

⁹⁰ *Id*.

⁹¹ ECF No. 198-2 at 13.

along with facility redesign, development of new performance baselines, 1 2 3 4 5

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contracting, and permitting for the HLW will concurrently occur by September 2019.92 Regarding the PT, Washington estimates that facility redesign will take three years, concluding in September 2022. 93 Washington asserts that its assumed dates are "based on best professional judgment and prior experience on the permit modification process."94

Analysis iii.

Regarding the HLW, the Court has adopted DOE's assumption that necessary facility redesign will be completed by December 31, 2021. Regarding the PT, the Court has assumed that DOE will have completed the necessary redesign work by December 31, 2022. These assumptions grant DOE two and three years, respectively, to complete any facility redesign mandated by the technical issue resolution concerning the HLW and PT.

While the Court has accepted DOE's proposed date for HLW facility redesign, the Court finds that DOE has not adequately supported its proposed date for the PT. DOE states that redesign of the PT will not be complete until December 31, 2024.95 DOE rationalizes that it must prioritize and direct resources to achieve

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⁹³ *Id.* at 17.

⁹² *Id*.

20 ⁹⁴ *Id.* at 13.

⁹⁵ ECF No. 196 at 7.

operational Direct Feed LAW, as well as asserting that the PT Facility is simply "more complex." ⁹⁶

As discussed in the Court's prior order, even if both parties propose a Direct Feed LAW approach, the Court cannot mandate Direct Feed LAW as part of the Amended Consent Decree since construction of an additional facility is beyond the scope of the four corners of the original Consent Decree. ⁹⁷ Therefore, the Court has not adopted DOE's assumed date for PT facility redesign completion because DOE's date is premised on prioritizing development and construction of a Direct Feed LAW facility, which is not required by the original Consent Decree.

The Court finds that the five year gap between DOE's assumed dates for the resolution of technical issues and the completion of facility redesign is not "suitably tailored" to holding DOE accountable to constructing and operating the WTP within a reasonable timeframe. As explained above, DOE can, if it can demonstrate "good cause," invoke the amendment mechanism under Section VII(D) should the Court's assumptions prove unattainable or unrealistic in light of future developments.

c. Development of New Performance Baselines and Contracting

Following facility redesign, new performance baselines and contracts must be developed prior to the resumption of HLW and PT construction. As noted by

⁹⁶ *Id*.

⁹⁷ ECF No. 170 at 21.

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space, and other factors." space, and other factors." i. DOE Proposal

DOE assumes that developing new performance baselines and contracting will be completed for the HLW by December 31, 2024, and for the PT by December 31, 2027. Space of the HLW by December 31, 2027.

DOE, "[a]lthough this process is not a scientific inquiry, developing and

negotiating these critical framework documents involves extensive engineering

work and project planning regarding necessary equipment, labor, suppliers, cost,

facility. ¹⁰⁰ "DOE will establish a baseline and contract only after redesign is complete." ¹⁰¹ As a basis for DOE's assumed completion dates, DOE relied upon its recent experience re-baselining and contracting the LAW. ¹⁰² As noted by DOE,

completion of facility redesign to finalizing new baselines and contracts at each

"the process to date has suggested that re-baselining and contracting might take longer for the WTP than for other projects, given the complexity of the work and the types of issues that have arisen." ¹⁰³

⁹⁸ ECF No. 196-2 at 8.

⁹⁹ *Id.* at 24.

 100 *Id*.

¹⁰¹ *Id.* at 8.

¹⁰² *Id.* at 20.

¹⁰³ *Id*.

ii. Washington Proposal

Regarding the HLW, Washington proposes the aforementioned simultaneous one year timespan with HLW facility redesign for DOE to develop new performance baselines, which Washington assumes will be completed by September 2019. 104 Regarding the PT, Washington proposes a two year timeframe with a milestone of September 2024 within which to re-baseline and contract. 105

Unlike DOE, Washington believes it is reasonable "to begin rebaselining before all technical issues are resolved." Washington bases this assumption on the notion that "[b]aselines and schedules are inherently risk-based and must have some 'educated uncertainty' associated with them." Washington generally objects that DOE "fails to explain why the rebaselining process will take three years and why it cannot be accomplished concurrently with technical issue resolution and redesign." ¹⁰⁸

iii. Analysis

For the purpose of establishing modified Consent Decree milestones, the Court will not assume that the development of new performance baselines and

¹⁰⁴ ECF No. 198 at 11.

 $^{^{105}}$ *Id*.

¹⁰⁶ ECF No. 208-1 at 10.

¹⁰⁷ *Id*.

¹⁰⁸ *Id.* at 6.

contracting can occur concurrently with either technical issue resolution or facility redesign, instead allowing each of those processes to be accomplished sequentially, building on the preceding phase. ¹⁰⁹ The Court has, however, assumed that developing new performance baselines and contracting will require two years for each facility. As such, the Court has assumed that re-baselining for the HLW will be complete by December 31, 2023, and for the PT by December 31, 2024. As above, DOE can, if it can demonstrate "good cause," invoke the amendment mechanism under Section VII(D) should the Court's assumptions prove unattainable or unrealistic in light of future developments.

d. Interim Milestones A-2, A-13, A-14 and A-19: Construction Substantially Complete

i. DOE Proposal

DOE, building on their assumed dates for technical issue resolution, facility redesign, and re-baselining, have proposed a "construction substantially complete" milestone of December 31, 2032, for the A-2 HLW construction milestone, and December 31, 2033, for the A-13, A-14, and A-19 PT construction milestones. ¹¹⁰ As noted by DOE, "[b]ecause the actual sequencing of these steps will not be known until a baseline and contract are developed, the dates included in DOE's

¹⁰⁹ See ECF No. 209-1 at 8 ("Until redesign is completed, there is no way to know how long new construction and facility modifications will take.").

¹¹⁰ ECF No. 196-1 at 2–3.

proposed milestone table align milestones A-13 and A-19 with the 'construction substantially complete' milestone for the Pretreatment Facility." ¹¹¹

ii. Washington Proposal

Washington proposes that the "construction substantially complete" milestones be set at December 31, 2025, for the HLW, and September 30, 2030, for the PT. 112 Washington extended the PT construction substantially complete milestone to "provide an additional buffer for uncertainty related to vessel testing, redesign and fabrication." Similarly, while Washington believes HLW construction could be completed at an earlier date, "[t]he State built in a two plusyear buffer . . . to accommodate any unforeseen technical issues." 114

iii. Analysis

As noted above, the Court has assumed that new performance baselines will have been developed for the HLW by December 31, 2023. Based on DOE's projection, eight years are required between concluding re-baselining and

¹¹¹ ECF No. 196-2 at 26.

¹¹² ECF No. 198 at 12.

¹¹³ ECF No. 198-2 at 18.

¹¹⁴ *Id*. at 3.

substantially completing HLW construction. 115 Based on Washington's projection, six years are required between the same benchmarks. 116

As noted above, the Court has assumed that new performance baselines will have been developed for the PT by December 31, 2024. Based on DOE's projection, six years are required between concluding re-baselining and substantially completing PT construction. ¹¹⁷ Based on Washington's projection, six years are required between the same benchmarks. ¹¹⁸

¹¹⁵ *Compare* ECF No. 196-2 at 24 *with* ECF No. 196-1 at 2 (assuming that, for the HLW, re-baselining will conclude on December 31, 2024, and construction will be substantially complete by December 31, 2032).

¹¹⁶ *Compare* ECF No. 198 at 11 *with id.* at 12 (assuming that, for the HLW, rebaselining will conclude by September, 2019, and construction will be substantially complete by December 31, 2025).

¹¹⁷ *Compare* ECF No. 196-2 at 24 *with* ECF No. 196-1 at 3 (assuming that, for the PT, re-baselining will conclude on December 31, 2027, and construction will be substantially complete by December 31, 2033).

¹¹⁸ *Compare* ECF No. 198 at 11 *with id.* at 12 (assuming that, for the PT, rebaselining will conclude by September, 2024, and construction will be substantially complete by September 30, 2030).

¹¹⁹ See id. at 12.

The Court notes that under Washington's proposal DOE would be forced to substantially construct the HLW by 2025, five years before the same deadline for the PT. 119 As an operational PT, or the voluntary development of a Direct Feed HLW, is required for DOE to commence the HLW commissioning process, Washington's proposed schedule would require the substantially constructed HLW to lay idle for the intervening five years until the PT could be built.

In addition, Washington's proposal would require DOE to finalize construction of the HLW before initiating construction of the PT. While the Court agrees that DOE must be held accountable to a pre-determined schedule, the Court will not coerce timeframes that in DOE's present judgment may result in an inefficient use of resources or are logistically inadvisable. As such, the Court has established modified milestone deadlines for HLW and PT construction relatively simultaneously, in order to grant DOE flexibility in how to accomplish the ultimate Consent Decree goals with discretion over how to maximize its resources in an efficient manner.

The Court concurs with DOE's proposal that Milestones A-13 and A-19 should be aligned with Milestone A-14. Milestone A-13 establishes a deadline for the installation of pretreatment feed separation vessels FEP-SEP-OOOO1A/1B and was originally required to be completed two years before the PT "construction

¹²¹ *Id*. at 28.

substantially complete" milestone. ¹²⁰ Milestone A-19 establishes a deadline for completing elevation 98' concrete floor slab placements in PT Facility, and was originally due to be completed three years before the PT "construction substantially complete" milestone. ¹²¹

In the interest of deferring to DOE's technical and project management expertise concerning WTP construction, the Court will modify Milestones A-13 and A-19 to align with Milestone A-14, the deadline for substantially completing PT construction. As both Milestones A-13 and A-19 must be completed as prerequisites to Milestone A-14, aligning the three milestones is a "suitably tailored" means of accounting for the uncertainties regarding PT construction, which can only be clarified once new performance baselines have been developed.

Taking into consideration the parties' assumption that HLW and PT construction will require between six and eight years, the Court has established modified scheduling milestones seven years after the assumed dates for completing the development of new performance baselines. As such, Milestone A-2 for substantially constructing the HLW has been modified to December 31, 2030. Milestones A-13, A-14, and A-19 for substantially constructing the PT have been modified to December 31, 2031. The Court finds that given the underlying

¹²⁰ ECF No. 59 at 27.

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uncertainties and assumptions modified construction milestones in the early 2030's are reasonably attainable as well as "suitably tailored" to hold DOE accountable.

2. Interim Milestones A-3 and A-15: Start Cold Commissioning

a. Milestone A-3: HLW Cold Commissioning

i. DOE Proposal

DOE has proposed June 30, 2035, for Milestone A-3, the deadline by which DOE must start HLW cold commissioning. ¹²² This proposed milestone is set thirty-six months after DOE would have satisfied Milestone A-2 for substantially constructing the HLW. ¹²³

ii. Washington Proposal

Washington proposes September 30, 2031, for Milestone A-3, five and a half years after Washington's proposed date for Milestone A-2. 124

iii. Analysis

Neither party has provided the Court with any evidence demonstrating that the timespan established in the Consent Decree is unworkable as related to the start of HLW cold commissioning. As such, it would not be a "suitably tailored" modification for the Court to impose a timespan that differs from that agreed to in the Consent Decree.

¹²² ECF No. 196-1 at 2.

¹²³ *Id*.

¹²⁴ ECF No. 198-1 at 11.

The Consent Decree scheduled HLW cold commissioning to begin eighteen months after the HLW was substantially constructed. ¹²⁵ As such, the Court has established Milestone A-3, the deadline to begin HLW cold commissioning, for eighteen months after the modified Milestone A-2, for a deadline of June 30, 2032.

b. Milestone A-15: PT Cold Commissioning

i. DOE Proposal

DOE has proposed June 30, 2035, for Milestone A-15, the deadline by which time DOE must start PT cold commissioning. ¹²⁶ This milestone is set eighteen months after DOE would have satisfied Milestone A-14 for substantially constructing the PT. ¹²⁷

ii. Washington Proposal

Washington proposes September 30, 2031, for Milestone A-15, one year after Washington's proposed date for Milestone A-14. 128

iii. Analysis

Neither party has provided the Court with any evidence demonstrating that the timespan established in the Consent Decree is unworkable as related to the start

¹²⁵ ECF No. 59 at 27 (compare milestones A-3 and A-2).

¹²⁶ ECF No. 196-1 at 3.

¹²⁷ *Id*.

¹²⁸ ECF No. 198-1 at 11 (Washington refers to these Milestones as A-33 and A-32, respectively).

of PT cold commissioning. Therefore, it would not be a "suitably tailored" modification for the Court to impose a timespan that differs from that agreed to in the Consent Decree.

The Consent Decree scheduled PT cold commissioning to begin one year after the PT was substantially constructed. ¹²⁹ Consequently, the Court has established Milestone A-15, the deadline to begin PT cold commissioning, for one year after the modified Milestone A-14, for a deadline of December 31, 2032.

3. Interim Milestones A-4 and A-16: Hot Commissioning Complete

The Court finds that, similar to the start of HLW and PT cold commissioning, neither party has provided the Court with any evidence demonstrating that the timespans established in the Consent Decree are unworkable as related to the period between the start of cold commissioning and the completion of hot commissioning. As such, it would not be a "suitably tailored" modification for the Court to impose a timespan that differs from those agreed to in the Consent Decree.

The original Consent Decree scheduled HLW hot commissioning to conclude eighteen months after HLW cold commissioning began. ¹³⁰ Therefore, the Court has established Milestone A-4, the deadline to complete HLW hot commissioning, for eighteen months after the modified Milestone A-3, for a

 $^{^{129}}$ ECF No. 59 at 27–28 (compare milestones A-15 and A-15).

¹³⁰ *Id.* at 27 (compare milestones A-4 and A-3).

deadline of December 31, 2033. The original Consent Decree scheduled PT hot commissioning to conclude one year after PT cold commissioning began. Consequently, the Court has established Milestone A-16, the deadline to complete PT hot commissioning, for one year after the modified Milestone A-15, for a deadline of December 31, 2033.

D. Low-Activity Waste Facility

1. Washington Proposal

Washington proposes accelerated scheduling milestones for the LAW, on the basis that the LAW is not afflicted by the same degree of unresolved technical concerns that have plagued the PT and HLW. 132 Washington notes that "both parties have previously proposed milestones in 2022 for completing hot commissioning of the [LAW]." 133 As this Court declined to expressly modify the Consent Decree to impose a new, Direct Feed LAW performance obligation, 134 Washington notes that any previously proposed schedule associated with supporting the operation of Direct Feed LAW is irrelevant. 135

¹³³ *Id*.

134 See ECF No. 170 at 17–21.

¹³¹ *Id.* at 28 (compare milestones A-16 and A-15).

¹³⁵ ECF No. 198 at 14.

¹³² ECF No. 198 at 13.

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However, Washington argues that "a 'suitably tailored' modification of the Decree . . . should not adjust the existing Decree's milestones for starting cold commissioning and completing hot commissioning of the [LAW] any further beyond the Decree's existing dates than is necessary." ¹³⁶ As DOE "has represented to the Court that it can (and indeed, intends to) achieve hot commissioning of the [LAW] by December 31, 2022," Washington proposes modified scheduling milestones premised on DOE's projection. ¹³⁷ Further, Washington has proposed additional milestone deadlines related to LAW technical issues, RCRA/Dangerous Waste permit modification, and construction benchmarks. ¹³⁸

Washington contends that "[i]t is critical that the [LAW] start-up as closely as possible to the start date in the current Consent Decree (December 31, 2019)." According to Washington, "[t]his will decrease the possibility of obsolescence or damage to existing critical components" while technical issues related to the PT and HLW are resolved. Washington also notes that a December

¹³⁶ *Id*.

¹³⁷ *Id.* at 14–15.

¹³⁸ *Id.* at 16–17.

¹³⁹ *Id.* at 15.

¹⁴⁰ *Id*.

31, 2022, milestone "ensure[s] that the [LAW] will be prepared to immobilize at least some tank waste into glass beginning in 2022." ¹⁴¹

2. DOE Proposal

DOE argues that Washington's proposed milestones "contradict the Court's ruling excluding Direct Feed LAW from the Decree." DOE contends that, although Washington "defends its 2022 milestone for the LAW Facility by stating that LAW 'with modifications,' can receive and treat waste before the PT is operational," Washington "is well aware that the LAW Facility can only operate before the PT Facility is operational through 'modifications' that implement Direct Feed LAW." DOE maintains that its proposal "respects the Court's Order by retaining the Decree's simultaneous WTP operation approach, while preserving DOE's ability to voluntarily proceed with Direct Feed LAW." 144

Further, DOE rebuts Washington's concerns of "obsolescence." ¹⁴⁵ DOE contends that Washington's proposal "mandates early construction of the LAW Facility but places other demands on limited Site resources that put at risk DOE's

¹⁴¹ *Id*.

¹⁴² ECF No. 209 at 2.

¹⁴³ *Id.* at 8 (emphasis in original).

¹⁴⁴ *Id.* at 8–9.

¹⁴⁵ *Id.* at 8 n.1.

ability to fund and operate Direct Feed LAW."¹⁴⁶ Under DOE's proposal, the LAW "will be supported either by DOE's voluntary implementation of Direct Feed LAW or by staging construction to bring the LAW facility online alongside the PT."¹⁴⁷

3. Analysis

In the Court's Second Order Regarding Motions to Modify Consent Decrees, the Court expressly found that there was no basis in the four corners of the original Consent Decree to require DOE to implement a Direct Feed LAW approach, because pretreatment of LAW was not one of the three performance objectives identified in the original Consent Decree. ¹⁴⁸ However, one of the performance objectives comprising the "primary goals" of the original Consent Decree was "(1) constructing and achieving initial operation of the Waste Treatment Plant ('WTP')." ¹⁴⁹ The Court further stated: "[t]he Court will not prohibit DOE from moving forward with the Direct Feed LAW approach at this time; the Court simply declines to modify the Consent Decree to include milestones in this Consent Decree for achieving that objective." ¹⁵⁰

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<sup>146</sup> Id.
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¹⁴⁷ *Id*.

¹⁴⁸ See ECF No. 170 at 4.

¹⁴⁹ *Id*.

¹⁵⁰ *Id.* at 21.

¹⁵¹ *See id.* at 8.

The Court has established Milestone A-7, the deadline to substantially complete LAW construction, for December 31, 2020, Milestone A-8, the deadline to begin LAW cold commissioning, for December 31, 2022, and Milestone A-9, the deadline to complete LAW hot commissioning, for December 31, 2023. The Court is aware that, as argued by DOE, the modified LAW milestones may only be realistically achievable through the incorporation of a Direct Feed LAW system. As noted above, both parties previously have encouraged the Court to mandate a Direct Feed LAW system and modify the original Consent Decree accordingly. ¹⁵¹ In fact, the Court has been informed that DOE "is proceeding with steps to voluntarily bring the LAW Facility online as soon as practicable." ¹⁵²

In setting LAW milestone deadlines that are more consistent with a Direct Feed LAW approach than the PT system that was included in the original Consent Decree, the Court is not ordering or mandating that DOE proceed with Direct Feed LAW. Instead, considering both the parties' desired outcome of expeditiously treating the waste at Hanford, and the reality that DOE is at present developing a Direct Feed LAW approach, the Court's modified milestones merely recognize the likely final outcome concerning the LAW. Should Direct Feed LAW ultimately prove unworkable, DOE can, if it can demonstrate "good cause," invoke the amendment mechanism under Section VII(D) and seek an extension. However, the

¹⁵² ECF No. 196 at 11.

Court finds that the above schedule, coupled with the flexibility established in Section VII(D) should circumstances unexpectedly change, is sufficiently "suitably tailored" to achieving LAW, a core subcomponent of the WTP, operations as required in the original Consent Decree..

E. Analytical Laboratory

As the LAB has been substantially constructed, ¹⁵³ the sole remaining LAB-related scheduling milestone is Milestone A-6, for completing methods validations. Methods validation must occur prior to commissioning of the various facilities. ¹⁵⁴

1. DOE Proposal

DOE proposes that methods validation be completed by December 31, 2034, six months before cold commissioning would begin on the HLW. 155

2. Washington Proposal

Washington proposes a series of methods validation milestones, one each for the LAW, HLW, and PT. ¹⁵⁶

3. Analysis

As noted above, the Court will not impose additional scheduling milestones beyond the nineteen included in the original Consent Decree. It is uncontested that

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¹⁵³ See ECF No. 196-1 at 2.

¹⁵⁴ See ECF No. 76 at 26.

¹⁵⁵ ECF No. 196-1 at 2.

¹⁵⁶ *Id.* at 20.

LAB methods validation for all facilities must be completed, at the latest, prior to the start of cold commissioning of the final facility. Under the Court's modified schedule, the PT is the final facility to commence cold commissioning, with a milestone of December 31, 2032. The Court will establish June 30, 2032, as the deadline for Milestone A-6, the deadline to complete all LAB methods validation. This date is six months prior to the start of PT cold commissioning. The milestone marks the deadline by which time DOE must complete all methods validation: methods validation for the LAW and HLW, by virtue of the remaining milestones, must occur prior to the Court's modified A-6 methods validation milestone.

F. Extension Mechanism for Waste Treatment Plant Milestones

1. DOE Proposal

DOE proposes a semi-automated extension mechanism for the WTP milestones as a means of "thoughtfully addressing the period of project uncertainty created by the unresolved technical issues." ¹⁵⁷ DOE argues that "[t]his mechanism ensures that the WTP is not governed by inflexible deadlines that ignore the changing realities of the project and that will lead to inefficiency, waste, and further delay." ¹⁵⁸ DOE contends that the extension mechanism should activate

¹⁵⁷ ECF No. 196 at 8.

¹⁵⁸ *Id*. at 9.

following any delay in the resolution of the technical issues, facility redesign, or development of new performance baselines. 159

DOE argues that the proposed extension mechanism is "suitably tailored to the changed circumstances, and is a measured, reasonable response to present conditions at the WTP." DOE supports the extension mechanism's implementation as "DOE cannot reasonably or responsibly project fixed dates for the HLW and PT Facilities at this time, and so cannot commit to a proposal that sets milestones for these Facilities without an extension process." ¹⁶¹

The proposed extension mechanism constitutes a four-step process. ¹⁶² First, each of the aforementioned benchmarks (resolution of technical issues, facility redesign, etc.) has a pre-established "trigger date." ¹⁶³ The "trigger date" represents the deadline by which the specified phase must be completed without negatively impacting an enforceable consent decree scheduling milestone. ¹⁶⁴ If a phase

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<sup>159</sup> Id. at 12.
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¹⁶⁰ *Id.* at 15.

¹⁶¹ *Id.*; *see also* ECF No. 196-2 at 4–5 (noting that "there is simply no way to set a firm schedule until these fundamental tasks have been completed and the scope and timing of the remaining work is determined").

¹⁶² ECF No. 196 at 12.

¹⁶³ *Id*.

¹⁶⁴ *Id*.

extends beyond the trigger date, an extension of the at-risk milestone would be automatically sanctioned on the basis that the milestone is unattainable. 165

Second, failing to meet a "trigger date" would commence a round of negotiations between DOE and Washington concerning the extension's length. ¹⁶⁶ DOE proposes a thirty-day period during which to begin negotiations followed by a ninety-day negotiation period. ¹⁶⁷

Third, if DOE and Washington fail to reach agreement, the automatic extension would default to one-year. ¹⁶⁸ DOE, in its discretion, would reserve the right to implement a different extension period as required by the relevant circumstances. ¹⁶⁹

Fourth, Washington would be permitted to challenge the automatic extension period before this Court. ¹⁷⁰ Under DOE's proposal, the extension, set by DOE, could only be overturned or modified if the Court found the decision to be "arbitrary or capricious." ¹⁷¹

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165 Id.
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¹⁶⁶ *Id.* at 12–13.

¹⁶⁷ *Id.* at 13.

¹⁶⁸ *Id*.

¹⁶⁹ *Id*.

¹⁷⁰ *Id*.

¹⁷¹ *Id*.

Under DOE's proposal, the four-step mechanism could be repeated infinite times until the underlying phases (resolution of technical issues, facility redesign, etc.) have concluded. 172

DOE argues that as the Consent Decree may require numerous modifications until the technical issues are resolved, the proposed semi-automatic extension mechanism is a "suitably tailored" response to any underlying uncertainty. ¹⁷³ DOE notes that "[1]engthy, recurrent extension proceedings would undermine efficient project management and advance planning, and result in irretrievable commitments of resources in the pursuit of impossible or unsuitable tasks that only serve to harm the project." ¹⁷⁴

DOE contends that the current modification procedure contained in Section VII(D) is inadequate, as "identified uncertainties may not later serve as a basis for an extension under this Court's application of *Rufo*." Finally, DOE argues that *de novo* review, the current standard, "fail[s] to give appropriate deference to [DOE's] expertise and authority." ¹⁷⁶

¹⁷² *Id*.

¹⁷³ *Id.* at 16.

¹⁷⁴ *Id*.

¹⁷⁵ *Id.* (citing ECF No. 139 at 21 ("However, if the change was actually anticipated when the decree was entered, then ordinarily, modification is not warranted.")).

¹⁷⁶ *Id.* at 17.

2. Washington Proposal

Washington argues that DOE's proposed extension mechanism "render[s] Energy's schedule largely unenforceable." Washington contends that the proposed extension mechanism "remove[s] any real incentive for Energy to meet the Decree's schedule," "reward[s] Energy for missing dates," and "[c]ollectively . . . diminish[es], rather than enhance[s], Energy's accountability under the Decree." 178

3. Analysis

The Court agrees with Washington. As discussed above, the Court previously has rejected DOE's repeated attempts to remove scheduling milestones from the Amended Consent Decree. The Court finds that DOE's proposed semi-automatic extension mechanism would circumvent the Court's prior ruling and allow DOE unfettered discretion to work at its own pace, regardless of the commitments that DOE made in the original Consent Decree.

DOE's four-step procedure falls far short of achieving accountability. While DOE grants Washington a role through negotiation, DOE is proposing a system where it may unilaterally extend milestones if the parties fail to reach a consensus. Washington, consequently, would be left with a non-existent and practically useless negotiating position. Washington would either have to accept DOE's

¹⁷⁷ ECF No. 208 at 10.

¹⁷⁸ *Id.* at 12.

proposed extension or object and helplessly watch DOE unilaterally extend the milestones indefinitely.

DOE also purports to grant the Court a role in reviewing DOE's proposed automatic extensions, but only with an "arbitrary and capricious" standard, not the de novo standard incorporated into the original Consent Decree. A decision is

arbitrary and capricious if the agency "has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." ¹⁷⁹

The Court finds that DOE's suggested avenue of judicial review concerning its extension mechanism is similar to DOE's proposed role of Washington in negotiations: illusory and contrary to the spirit of consensus that was memorialized in the original Consent Decree.

The Court previously noted that "[m]odifying the Consent Decree to eliminate set deadlines would make the modifications less likely than the current Consent Decree to resolve the problem of the changed circumstances or to achieve the third objective of accountability." There is little difference between omitting

¹⁷⁹ See O'Keeffe's, Inc. v. U.S. Consumer Prod. Safety Comm'n, 92 F.3d 940, 942
(9th Cir. 1996) (quoting Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins.
Co., 463 U.S. 29, 43 (1983)).

¹⁸⁰ ECF No. 170 at 16.

enforceable milestones and establishing milestones subject to unlimited extension at DOE's virtually unchecked discretion. Neither of those two options is acceptable, nor "suitably tailored" to hold DOE accountable to an attainable schedule.

The Court rejects DOE's argument that "[1]engthy, recurrent extension proceedings would undermine efficient project management . . . all while imposing unnecessary burdens on the Court and the parties." The Court finds that the existing amendment procedure under Section VII(D) of the Consent Decree remains an effective means of confronting a "serious risk" that DOE will miss a Consent Decree milestone. ¹⁸²

The Court previously determined that Section VII(D) is "consistent with Supreme Court and Ninth Circuit law governing the modification of consent decrees." Therefore, DOE's alleged concern that "the identified uncertainties may not later serve as a basis for an extension" is unwarranted. Under the Consent Decree, the Court retains the ability to amend milestones for "good cause" due to circumstances "anticipated in the development of the schedule, but which have a greater impact on the schedule than was predicted or assumed at the time

¹⁸¹ ECF No. 196 at 16.

¹⁸² See ECF No. 59 at 19–21

¹⁸³ ECF No. 139 at 19.

¹⁸⁴ ECF No. 196 at 16.

the schedule was developed."¹⁸⁵ As noted above, the Court's modified WTP scheduling milestones are based on a number of underlying assumptions. If DOE can demonstrate good cause at a future date, milestone extensions can be adequately addressed under the process established in Section VII(D).

The Court already held that the Amended Consent Decree must contain "a new, attainable schedule that will hold DOE accountable to constructing the WTP." DOE's extension mechanism would "create a vacuum in which DOE would be free to proceed at its own rate without any safeguards for Washington or enforcement by the Court." 187

DOE must be accountable. Granting DOE the unilateral, virtually unbounded freedom to extend any Consent Decree WTP scheduling milestone would result in the opposite of accountability. Therefore, the Court rejects DOE's proposed WTP milestone extension mechanism as the procedure is not "suitably tailored" to the changed circumstances as recognized by this Court. 188

¹⁸⁵ ECF No. 59 at 12–13.

¹⁸⁶ ECF No. 170 at 7.

¹⁸⁷ See id. at 16.

¹⁸⁸ See id. at 6 (noting that "the Court recognized the following changed conditions cited by Washington: (1) the extent of DOE's failure to comply with the Consent Decree terms; [and] (2) DOE's unilateral decision to cease construction of the WTP") (citing ECF No. 139)).

G. Milestones A-1 and A-17: Achieving Initial Operations

The Court finds that, similar to the milestones concerning HLW and PT commissioning, neither party has provided the Court with any evidence demonstrating that the timespans established in the Consent Decree are unworkable as related to the time between the conclusion of commissioning and the hot start of the WTP. Therefore, imposition of a timespan that differs from that agreed to in the Consent Decree would not be a "suitably tailored" modification. The Consent Decree scheduled the hot start of the WTP the same day that hot commissioning concluded on the various subprojects. ¹⁸⁹ The Court has established Milestone A-17, the deadline for the hot start of the WTP, for the same day as Milestones A-4 and A-16, the deadlines for completing hot commissioning of the HLW and PT, for a milestone deadline of December 31, 2033.

Similar reasoning applies to Milestone A-1, to achieve initial WTP operations. The Consent Decree scheduled initial operations of the WTP three years after the hot start milestone. ¹⁹⁰ The Court has established Milestone A-1, the deadline to achieve initial WTP operations, for three years after Milestone A-17, the deadline to hot start the WTP, for a milestone deadline of December 31, 2036.

¹⁸⁹ ECF No. 59 at 28.

¹⁹⁰ *Id.* at 27–28.

II. RETRIEVAL OF NINETEEN SINGLE-SHELL TANKS

The Consent Decree requires DOE to complete retrieval of nineteen SSTs by September 30, 2022. ¹⁹¹ Specifically, DOE was required to retrieve the following ten SSTs from the C-Farm: C-101, C-102, C-104, C-105, C-107, C-108, C-109, C-110, C-111, and C-112. ¹⁹² DOE further agreed to select nine additional SSTs to be retrieved, with an option to later substitute a previously identified SST with another SST at DOE's discretion. ¹⁹³ Subject to DOE's right to substitute SSTs, DOE selected the following SSTs from the A and AX-Farms: A-101, A-102, A-104, A-105, A-106, AX-101, AX-102, AX-103, and AX-104. ¹⁹⁴

Prior to the parties' proposals to modify the Consent Decree, DOE had completed the retrieval of tank waste from seven SSTs in the C-Farm. ¹⁹⁵ Of the nineteen SSTs originally subject to the Consent Decree, DOE still must retrieve C-102, C-105, C-111, and the additional nine selected SSTs, subject to DOE's right to substitute. ¹⁹⁶ Although DOE asserts that C-102 was to be retrieved near the end

¹⁹¹ *Id.* at 33.

¹⁹² *Id*.

¹⁹³ *Id*.

¹⁹⁴ ECF No. 196-1 at 18.

¹⁹⁵ ECF No. 196-3 at 3.

¹⁹⁶ *Id*.

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of 2015, 197 the Court will presume for the purpose of this Order that C-102 has yet to be retrieved, as there has been no documentation submitted to the Court that the required certification has been completed. However, the Court has factored in C-102's completed retrieval when establishing milestones for retrieving the remaining twelve SSTs subject to the Consent Decree.

A. Ultimate Completion Date for Single-Shell Tank Retrieval

1. DOE Proposal

In the initial round of proposed modifications, DOE asserted that the remaining SSTs would be retrieved by September 30, 2023. 198 However, due to a claimed gap in funding, DOE has extended the completion date six months to March 31, 2024. 199 DOE contends that the lack of funding has limited DOE's ability to hire and train Tank Farm workers, as well as obtain necessary retrieval equipment.²⁰⁰ Further, DOE contends that the completion date must be pushed back from the 2022 milestone as the original deadline is "no longer viable due to ongoing delays associated with tank vapor-related protective measures." ²⁰¹

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²⁰⁰ *Id*.

¹⁹⁷ *Id*.

¹⁹⁹ *Id*.

¹⁹⁸ *Id.* at 8.

²⁰¹ ECF No. 196 at 17.

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DOE justifies delaying retrieval until 2024 to compensate for "the funding climate in Congress [being] increasingly constrained in recent years." Further, DOE argues that "completing Consent Decree retrievals by 2024 would not increase risks to public health or the environment as compared to 2022 or 2023." ²⁰³

DOE also cites concerns about tank farm work safety. "DOE is taking a cautious approach to the continued use of additional protective equipment for workers related to tank vapors." DOE notes that the proposed delay of SST retrievals is partly a result of workers' use of self-contained breathing apparatus ("SCBA"). DOE contends that Washington "does not dispute either that SCBA is an appropriate interim means of addressing reported vapor exposures or that SCBA has resulted in significant delays." 206

2. Washington Proposal

Washington, unlike DOE, proposes retention of the original retrieval completion date of September 30, 2022. ²⁰⁷ Washington argues that DOE's

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<sup>202</sup> Id. at 19.
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 $^{^{203}}$ *Id*.

²⁰⁴ ECF No. 209-2 at 4.

²⁰⁵ *Id*.

²⁰⁶ *Id.* at 12.

²⁰⁷ ECF No. 198 at 22.

proposal "simply extends the schedule." While Washington acknowledges DOE's safety concerns, Washington contends that DOE "has failed to show either that use of protective measures will actually necessitate a twelve-month delay, or that it has evaluated all other options and alternatives to individual SCBA use." Washington argues that "Energy fails to justify its need for an associated schedule extension *now*, some seven years before the Consent Decree's 2022 deadline." ²¹⁰

Washington also notes that DOE's "proposal to extend SST retrievals well beyond 2024 is also significant in light of the fact that further delays will increase the likelihood [of] releases of contaminants to the environment." As "all of Hanford's SSTs have been declared as unfit for use . . . [f]urther delays will increase the possibility that Consent Decree SSTs will leak tank contents to the environment, either from water intrusions while in the . . . interim 'storage' stage or during the retrieval." ²¹²

3. Analysis

As noted above, the Court has found that changed conditions, including funding and labor shortages, technical concerns, and equipment failure, have

²⁰⁸ *Id*.

²⁰⁹ *Id.* at 23.

²¹⁰ ECF No. 208 at 18 (emphasis in original).

²¹¹ ECF No. 208-2 at 5.

²¹² *Id.* at 5–6.

resulted in the current retrieval completion milestone of September 30, 2022, being unworkable or overly onerous. ²¹³ Further, the Court incorporates delay as a result of the use of enhanced personal protective equipment related to tank vapors. ²¹⁴ DOE alleges that this delay, due to the cumbersome SCBA use, reduces worker productivity by an average of fifty percent. ²¹⁵ However, DOE anticipates that vapor-related SCBA use will only be required until the end of September 2016. ²¹⁶

The Court finds that modifying the ultimate completion milestone for the retrieval of the nineteen SSTs is "suitably tailored" to address the changed circumstances noted by the Court. Therefore, the Court has adopted DOE's proposed milestone of March 31, 2024, for the complete retrieval of the nineteen identified SSTs. The modified completion date is only a year and a half removed from the original milestone of September 30, 2022. The Court finds that the marginally extended completion deadline is "suitably tailored" to account for the identified changed circumstances while "retain[ing] the essential features" of the Consent Decree and that a March 31, 2024, completion milestone "further[s] the primary goal" of retrieving the nineteen SSTs in a timely, yet safe, manner. ²¹⁷

²¹⁶ *Id*.

²¹³ ECF No. 170 at 6–7.

²¹⁴ ECF No. 196 at 4.

²¹⁵ *Id.* at 18.

²¹⁷ See Keith, 784 F.2d at 1460.

B. Sequencing of Single-Shell Tank Retrieval

1. DOE Proposal

DOE asserts that C-105 and C-111, the two remaining C-Farm SSTs, have proven "especially challenging to retrieve," and require revised milestone deadlines. ²¹⁸ In light of continuing difficulty with retrieving the waste in C-111, DOE has identified April 30, 2016, as the target date for completing C-111 retrieval. ²¹⁹ Retrieval of C-105 has been delayed due to both funding constraints and "difficulties identifying tank waste properties." ²²⁰

Instead of proposing a firm milestone for retrieving C-105, DOE "commits to propose within sixty days after the State's approval of a Tank Waste Retrieval Work Plan a milestone for completion not to exceed September 30, 2022." DOE "has already initiated negotiations of retrieval technology for C-105." DOE notes that C-105 is an "assumed leaker," which forces DOE to use a different type of retrieval technology than on the other C-Farm tanks. 223

²¹⁹ *Id.* at 20; *see also* ECF No. 196-3 at 5 ("DOE has encountered particularly

difficult conditions . . . that have delayed retrieval of waste.").

²²⁰ ECF No. 196 at 20.

²²¹ Id

²²² ECF No. 196-3 at 4.

²²³ ECF No. 209-2 at 5.

²¹⁸ ECF No. 196 at 18.

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Further, DOE proposes a staggered approach to retrieving the remaining nine SSTs. ²²⁴ Specifically, DOE proposes to initiate retrieval of two A/AX-Farm SSTs by December 31, 2018, retrieval of a further two A/AX-Farm SSTs by December 31, 2020, and retrieval of the five remaining A/AX-Farm SSTs by March 31, 2023.²²⁵

DOE argues that "[f]irm initiation milestones coupled with flexible sequencing of tanks . . . will allow DOE to retrieve waste efficiently and effectively." ²²⁶ DOE contends that "[i]nitiation milestones that leave sequencing to DOE's expertise afford important operational flexibility."²²⁷

DOE also contends that mandating retrieval of certain SSTs in a preordained sequence is misguided. First, DOE notes that "relevant technologies for retrieval of hardened sludge have already succeeded in C-Farm retrievals . . . and the State has not supported its belief that retrieval of AX-104 will require development of a third technology."228 Second, contrary to Washington's proposal, AX-104 is a "sludge" tank while AX-101, AX-102, and AX-103 are primarily

²²⁷ *Id.* at 10.

²²⁴ ECF No. 196 at 18.

²²⁵ ECF No. 196-1 at 18.

²²⁶ ECF No. 209 at 9.

"saltcake" tanks." 229 As such, DOE argues that any "lessons learned" from AX-

104 will be negligible. ²³⁰ Third, any "lessons learned" from retrieving AX-104

1 2 3 could not be practically implemented with AX-101, AX-102, and AX-103 under 4

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2. Washington Proposal

Washington's proposed accelerated schedule. 231

Washington proposes to gradually ramp up the completion of SST retrievals over a seven-year period. 232 In hopes of avoiding past delays, Washington proposes to mandate retrieval of the "anticipated more difficult or time-consuming tanks [at] the start of the schedule."233 Washington contends that "[t]his means that problems can be identified and resolved early in the remaining Consent Decree timeline, rather than arising at its conclusion when delays become unavoidable."234 Washington defends its proposed sequencing as it "does not backload the schedule, and stages more difficult tanks at the start."235

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²²⁹ *Id*.

 230 *Id.*

²³¹ *Id*.

 233 *Id*

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²³⁴ *Id*.

²³⁵ ECF No. 208 at 18.

²³² ECF No. 198 at 20.

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Under Washington's proposal, DOE must retrieve C-111 by September 30, 2016. ²³⁶ DOE would then have until September 30, 2017, to retrieve the remaining C-Farm SST, C-105. ²³⁷ The remaining milestones would "gradually ramp up the nine A/AX-Farm retrievals over the remaining years of the Consent Decree schedule." ²³⁸

Washington's A/AX-Farm retrieval schedule begins with AX-104, which Washington proposes would be retrieved by September 30, 2017.²³⁹ Washington believes that AX-104 contains highly radioactive waste, creating heat within the tank that may have dried the waste into a hardened sludge that will be difficult to retrieve.²⁴⁰ Washington contends that the remaining three AX-Farm SSTs may have similar hardened waste and therefore proposes that DOE complete the remaining AX-Farm retrievals by September 30, 2019, prior to commencing retrieval of the five A-Farm SSTs.²⁴¹ Washington proposes that DOE would have

²³⁶ ECF No. 198 at 21.

²³⁷ *Id*.

²³⁸ *Id*.

²³⁹ *Id*.

²⁴⁰ *Id.* at 21–22.

²⁴¹ *Id.* at 22.

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three more years to retrieve the five remaining A-Farm SSTs, with a milestone deadline of September 30, 2022. 242

To avoid past mistakes and delays, Washington proposes that "SST retrieval milestones must be established in such a way that problems are identified early and retrievals are completed on a specific timetable that allows Energy to turn its focus and resources to the next batch of tanks at hand." Washington focuses its proposed milestones on completion of retrievals, as opposed to initiation of retrievals. Washington argues that DOE's approach risks repeating past mistakes by "back-loading its retrievals such that predictable and recurrent events, like equipment failures, safety basis issues, [and] equipment procurement problems" will inevitably lead to missed milestones. 245

3. Analysis

Concerning the remaining SST retrievals, the Court's primary goal is to strike the appropriate balance between holding DOE accountable through an enforceable schedule while leaving DOE the flexibility to make necessary scientific and technical judgments regarding retrieval sequencing. Therefore, the

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<sup>242</sup> Id.
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²⁴³ ECF No. 198-4 at 5.

²⁴⁴ *Id*.

²⁴⁵ See id.

Court will not mandate that DOE retrieve the remaining SSTs in a pre-determined sequence.

However, in order to be "suitably tailored" any modification must incorporate measures to address accountability. To ensure accountability, the Court has established one interim retrieval milestone based on the parties' proposals:

DOE must complete five of the twelve remaining SST retrievals by December 31, 2020. DOE will have the flexibility to select the five SSTs that must be retrieved by the December 31, 2020, milestone. The Court finds that an interim milestone is a "suitably tailored" modification designed to ensure that DOE makes adequate and efficient progress while completing the remaining SST retrievals in a timely manner.

C. Automatic SCBA-Related Extension Mechanism

1. DOE Proposal

As noted by DOE, certain SSTs "emit excess vapor to the atmosphere to prevent the unsafe buildup of flammable gasses as part of normal operation." ²⁴⁶ The Tank Vapor Assessment Team noted that "potential short, intermittent, high concentration vapor emissions could result in brief but intense exposures for some workers." ²⁴⁷ In response, "DOE is carefully studying the issue and is taking a

²⁴⁶ ECF No. 196-3 at 8.

²⁴⁷ *Id*. at 9.

protective approach to worker safety . . . [which] includes directing Tank Farm workers to wear additional protective equipment such as SCBA." ²⁴⁸

SCBA use "reduces the efficiency of tank waste retrievals for several reasons." SCBA imposes additional "physiological constraints on workers from increased heat, weight, and reduced mobility." Workers must cease activity every twenty to forty minutes to replace compressed air tanks. Further, regulatory requirements prevent SCBA use when air temperature rises above a certain level. SCBA use when air temperature rises above a certain level.

DOE alleges that "an average fifty percent reduction in worker productivity associated with the use of additional protective equipment (including [SCBA]) will extend retrievals until September 30, 2023." 252 DOE "anticipates, and its proposal assumes, that vapor-related SCBA will continue in the A and AX Farms . . . through the end of September 2016." 253 In the event that SCBA use is

²⁴⁸ *Id*.

²⁴⁸ Id

²⁴⁹ *Id*.

²⁵⁰ *Id*.

²⁵¹ *Id*.

²⁵² ECF No. 196 at 18.

²⁵³ *Id*.

mandated beyond September 30, 2016, DOE has proposed an automated extension mechanism concerning any of the remaining SST retrieval milestones.²⁵⁴

In response to vapor-related hazards, DOE proposes that "certain retrieval milestones would be extended automatically by one day for every two days in SCBA, until DOE notifies the Court that the extension is no longer necessary." ²⁵⁵ Under DOE's proposal, "DOE may determine based on available information that it is in the best interests of the Tank Farm retrieval employees to continue using SCBA beyond FY2016." ²⁵⁶ DOE argues that the "2:1 ratio of the extension is . . . reasonable, because experience has shown that SCBA reduces the efficiency of retrieval work . . . by approximately 50%." ²⁵⁷ DOE notes that, without an extension mechanism, "DOE would have to propose a date well beyond 2024 to reasonably accommodate this contingency and the very real risk it currently poses to completing the retrievals in a timely fashion." ²⁵⁸

However, DOE "does not yet have all of the data it requires" to determine whether SCBA use will be required beyond 2016. 259 Additionally, "Tank Farm

²⁵⁴ *Id*.

²⁵⁵ *Id.* at 18–19.

²⁵⁶ ECF No. 196-3 at 10.

²⁵⁷ *Id.* at 11–12.

²⁵⁸ *Id.* at 12.

²⁵⁹ *Id.* at 10.

workers maintain the option to continue using SCBA equipment, even if DOE . . . determines that it is not technically necessary." ²⁶⁰ DOE "expects that some workers will opt to do so based on past and current experience." ²⁶¹

2. Washington Proposal

Washington argues that, similar to DOE's proposed WTP extension mechanism, DOE's proposal puts "significant schedule control solely in Energy's hands." ²⁶² The extension "compounds as work is performed and bears no relation to the length of extension (if any) Energy might actually need to complete finite tank retrievals." ²⁶³ Washington contends that the proposal serves "as a disincentive for Energy to resolve schedule problems and work with urgency" and insulates DOE "from any accountability to the State or the Court." ²⁶⁴

Further, Washington raises specific objections to DOE's mechanism. First, the automatic extension mechanism "is not tied to the actual amount of additional time Energy may need to accommodate SCBA delays." ²⁶⁵ Second, DOE does not

²⁶⁰ *Id.* at 10–11.

²⁶¹ *Id.* at 11.

²⁶² ECF No. 208 at 13.

 $^{^{263}}$ *Id*.

²⁶⁴ *Id.* at 13–14.

²⁶⁵ ECF No. 208-2 at 3.

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clarify "what qualified as a 'day' of SCBA."²⁶⁶ For example, Washington argues that under DOE's generalized proposal "even an hour of SCBA use each of two separate days provides an additional twenty-four hours to effectuate retrievals."²⁶⁷ Third, as DOE's mechanism compounds additional days, DOE's "plan allows for increasing delays in Consent Decree retrievals for a theoretically ever-decreasing workload."²⁶⁸

While Washington admits that "use of SCBA for all tank retrieval work will result in some reduction of worker efficiency," Washington contends that DOE "provides no information to support its efficiency reduction estimate." As noted by Washington, DOE "does not provide any studies, underlying data, or even anecdotal evidence to support what appears to be, at best, a ballpark guess." ²⁷⁰

3. Analysis

The Court previously determined that "any modification to the Decrees must be suitably tailored to create a new, attainable schedule that will hold DOE accountable to . . . retrieving nineteen SSTs." The Court ordered the parties to

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<sup>266</sup> Id.
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²⁶⁷ *Id*.

 $^{^{268}}$ *Id.* at 4.

²⁶⁹ *Id.* at 4–5.

²⁷⁰ *Id.* at 5.

²⁷¹ ECF No. 170 at 7.

submit "specific milestone deadlines for completing the retrieval of nineteen SSTs." ²⁷²

The Court rejects DOE's proposed automatic extension mechanism correlated to future SCBA use for the same reason that the Court rejected DOE's proposed extension mechanism for WTP construction milestones. The Amended Consent Decree will contain milestones that will enact an enforceable schedule for retrieving the remaining SSTs. Any automated extension mechanism, operating within DOE's sole discretion, would negate the establishment of milestone deadlines and fail to hold DOE accountable, one of the primary goals of the original Consent Decree.

Further, the Consent Decree already contains a provision addressing the interrelationship between safety concerns and Section VII(D) "good cause" schedule amendments.²⁷³ Under Section VII(F), DOE may notify Washington that a safety concern exists, inform Washington of any impact on Section IV milestones, and propose a schedule amendment.²⁷⁴

The Court is satisfied that, should extensions related to either mandated or voluntary SCBA use be necessitated, Section VII(F) will be adequate to craft a solution acceptable to both parties. If the parties are unable to reach an agreement,

²⁷² *Id.* at 32.

²⁷³ See ECF No. 59 at 16–18.

²⁷⁴ See id.

DOE may invoke the Section IX dispute resolution procedures. In such a scenario, the Court will consider DOE's petition if DOE provides adequate documentation and statistical information concerning the impact of SCBA use. The Court will not, however, make a premature determination that theorized future SCBA use will extend the SST retrieval schedule, years before the evidence necessary to make such a determination has been developed.

While the Court understands the importance of tank farm worker safety, the Court will not give DOE unilateral control over the SST retrieval schedule. Such a plan, lacking in firm enforceable milestones, would not be suitably tailored to holding DOE accountable. However, the Court has incorporated a buffer for any period of delay due to currently foreseen SCBA use in calculating the date for the final retrieval completion milestone.

SST retrieval must be completed as expeditiously as possible both for the best interests of the public and the environment. Therefore, the Court will not implement an automated SCBA use extension mechanism related to retrieving waste from the remaining SSTs.

D. 242-A Evaporator Effectiveness and Contingent Double-Shell Tanks

DOE plans to use the 242-A Evaporator "to create enough tank space to facilitate the timely retrieval of the nine A and AX Farm tanks." Overall, "[t]he 242-A Evaporator reduces the waste volume stored in DSTs by concentrating the

²⁷⁵ ECF No. 196-3 at 27.

liquid waste, thereby creating additional storage space for waste retrieved from single-shell tanks."²⁷⁶ The 242-A Evaporator serves two distinct functions: (1) "it evaporates liquid from the existing waste in the DSTs, thereby creating additional capacity;" and (2) the "242-A Evaporator operates to remove liquid that was added to the single-shell tanks during the retrieval process."²⁷⁷

The Court previously found that

[i]f the Evaporator fails to prove as successful as DOE represents, resulting in further delay of the retrieval of nineteen SSTs, the Court would be acting within its authority to require DOE to build additional DSTs to provide sufficient storage space for the waste retrieved from the nineteen SSTs, an express objective of the Consent Decree.²⁷⁸

The Court held that the Consent Decree would be modified "to require DOE to construct additional DSTs contingent on DOE's failure to achieve certain SST retrieval milestones."²⁷⁹

1. DOE Proposal

DOE argues that contingent DSTs be mandated only if DOE fails to achieve specified yearly Evaporator targets and any resulting delay cannot be mitigated. ²⁸⁰ DOE provides a number of arguments, some specifically addressing its proposed

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<sup>276</sup> Id. at 12.
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²⁷⁷ *Id.* at 13.

²⁷⁸ ECF No. 170 at 27.

²⁷⁹ *Id*.

²⁸⁰ ECF No. 196 at 37.

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timetable and others addressing contingent DSTs in general. Further, DOE asserts that "DOE has several much more efficient and effective options if unanticipated Evaporator performance issues were to result in a shortfall in double-shell tank space." These mitigation options include additional or longer evaporation campaigns, modifications to the Evaporator to improve efficiency, implementation of alternative technologies or waste management practices, or construction of a new Evaporator. ²⁸²

DOE disputes the utility of new DSTs based on time, cost, and likely minimal impact. DOE contends that "new double-shell tanks would not be built in time to affect the pace of the twelve remaining retrievals." As noted by DOE, "[g]iven that a double-shell tank would take approximately eight to ten years to construct . . . it is almost certain that the tank would not be available until long after the twelve remaining retrievals required under the Consent Decree are complete." DOE "projects that new double-shell tanks would cost between \$85 million to \$150 million per tank for one-million-gallon tanks." ²⁸⁵

²⁸¹ *Id.* at 34.

 $^{^{282}}$ *Id*.

²⁸³ *Id*.

²⁸⁴ *Id*.

²⁸⁵ ECF No. 196 at 34.

Given the other financial constraints at Hanford, DOE expects that "the excessive cost of constructing new double-shell tanks would likely jeopardize other important nuclear cleanup activities at Hanford and around the Nation." ²⁸⁶ DOE also argues that it has not built a DST in almost thirty years at the Hanford Site, with the result that "a significant amount of time and personnel resources would need to be devoted to the effort to design, review, and construct the DST." ²⁸⁷

DOE argues that "construction of new double-shell tanks would not appreciably reduce the risk of groundwater contamination at Hanford." As DOE believes that "the risk of single-shell tank leakage will not be significantly greater due to the delay in WTP operations" and "future leaks from Hanford's single-shell tanks would not pose an immediate or near-term threat to public health . . . [c]onstruction of new double-shell tanks is . . . not justified from a risk-reduction perspective." ²⁸⁹

Under DOE's proposal, DOE only would be forced to construct new DSTs if "more efficient, cost-effective measures are not available." ²⁹⁰ DOE proposes that if

²⁸⁶ *Id.* at 35.

²⁸⁷ ECF No. 196-3 at 23.

²⁸⁸ ECF No. 196 at 35.

²⁸⁹ *Id*.

²⁹⁰ *Id.* at 37.

242-A Evaporator or SST waste reduction targets are not satisfied, DOE be given an opportunity to implement alternative measures to mitigate any expected shortfalls.²⁹¹

DOE generally proposes "to reduce tank waste volume by at least 5.9 million gallons through a series of Evaporator campaigns between 2016 and 2021." ²⁹² DOE affirms that 5.9 million gallons of reduction "will be sufficient to complete the nine A and AX Farm tank retrievals without the need for new double-shell tanks." ²⁹³ Specifically, DOE proposes to reduce waste volume by 0.6 million gallons in 2016, 0.9 million gallons in 2017, 0.7 million gallons in 2018. 1.2 million gallons in 2019, 0.9 million gallons in 2020, and 1.6 million gallons in 2021. ²⁹⁴

DOE proposes to file annual reports with the Court identifying the target amount of tank waste volume to be reduced that year to reach the overall target of 5.9 million gallons.²⁹⁵ If DOE fails to meet the annual Evaporator target, DOE

²⁹¹ *Id*.

²⁹² *Id.* at 38.

²⁹³ *Id*.

²⁹⁴ ECF No. 196-1 at 20–21.

²⁹⁵ ECF No. 196 at 38.

proposes that the annual report will explain "whether and how it will be able to recover the shortfall." ²⁹⁶

If the Evaporator fails to meet its annual target as a result of inadequate waste feed, DOE proposes that the contingent "obligation to build new tanks will not be triggered" and instead "the time to achieve the required waste volume reduction would be extended in proportion to the amount of time the sufficient waste feed was unavailable." DOE contends that "if sufficient waste feed is unavailable, DOE may be unable to achieve a waste volume reduction target for one year or several." 298

Further, DOE proposes "additional necessary conditions on the obligation to construct new double-shell tanks." 299 DOE argues that the obligation to build new DSTs could be suspended at DOE's sole discretion if DOE finds that "[t]he cost of constructing and placing in service additional double-shell tanks would result in diversion of funds that would jeopardize DOE's ability to undertake cleanup activities important to protect public health and the environment" or that "[t]he detriments of constructing and placing in service additional [DSTs] are greater that the detriments to the Hanford tank waste project or the risk to public health and the

²⁹⁶ *Id*.

²⁹⁷ *Id.* at 39.

²⁹⁸ ECF No. 196-3 at 20.

²⁹⁹ ECF No. 196 at 39.

environment from any delay in completing" the remaining SST retrievals. 300 Further, DOE proposes that any DST construction obligation "would also be suspended if mitigation measures implemented thereafter can recapture the shortfall or if the remaining retrievals can be completed as soon as or sooner than would be achieved were new DSTs to be constructed." 301

DOE argues that requiring any preliminary DST project management work is "unsound from both a fiscal and project management perspective." For example, DOE "estimate[s] that the up-front work proposed by the State would cost approximately \$75-\$105 million for two tanks." DOE asserts that such expenditure "would not only be an extraordinary waste of taxpayer funds, but could divert resources from other tank retrieval and WTP-related activities mandated under the Consent Decree."

Finally, DOE contends that Washington's aggressive Evaporator targets are ill-conceived and demonstrate a lack of technical understanding. For example, "there will not be sufficient waste feed to enable either the annual 1.4 and 1.6 million gallon or overall 8.77 million gallon waste volume reductions

 $^{^{300}}$ *Id.* at 39–40.

 $^{^{301}}$ *Id.* at 40.

³⁰² ECF No. 209 at 14.

³⁰³ *Id*.

³⁰⁴ *Id*.

[Washington] demands through 2020."³⁰⁵ Much of the waste volume to be reduced will come from the to-be-retrieved A and AX-Farm SSTs.³⁰⁶ DOE also contends that Washington "provides no technical basis for the rigid annual volume reductions . . . [and] arbitrarily selected set amounts of 1.4 million gallons in 2016 and 1.6 million gallons for each year from 2017 to 2020."³⁰⁷

2. Washington Proposal

Washington "proposes a suite of firm milestones to achieve the 8.77 million gallons of waste reduction Energy has projected it must achieve." Washington's 8.77 million gallon figure factors in "SST retrievals, safety and headspace concerns, and the loss/pending retrieval of leaking DST AY-102." Specifically, Washington proposes reducing DST waste capacity by 1.4 million gallons in 2016, followed by 1.6 million gallons of further reductions in 2017, 2018, 2019, and 2020. 310

Washington's motivation for setting aggressive Evaporator goals stems from Washington's continued apprehension that DOE's "estimates of Evaporator

³⁰⁵ *Id.* at 15–16.

³⁰⁶ *Id.* at 16.

³⁰⁷ ECF No. 209-2 at 18.

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³⁰⁸ ECF No. 198 at 23.

 310 *Id*.

 309 *Id.*

performance are optimistic."³¹¹ According to Washington, "setting aggressive targets with an earlier end date . . . ensures that any problems with Evaporator performance become evident as early as possible, rather than later in the schedule when delays become unavoidable."³¹²

As to DST construction triggers, Washington proposes "a direct nexus between the severity of Evaporator and/or SST retrieval failures and the amount of DST space to be constructed." For example, Washington proposes that "[f]or each instance that Energy falls 2 million gallons short of its Evaporator targets . . . [DOE] will be required to begin constructing a corresponding 2 million gallons in additional DST space, up to a total of 8 million gallons." Washington contends that two million gallons is a sufficiently high amount that such a volume deficit is "unlikely to be recovered from in subsequent campaigns." Similarly, DOE would be "required to begin DST construction (again in 2 million gallon increments) if it fails to meet any of the SST retrieval milestones because of a lack of DST space."

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<sup>311</sup> Id. at 24.
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³¹² *Id*.

³¹³ *Id.* at 25.

³¹⁴ *Id*.

³¹⁵ *Id.* at 26.

³¹⁶ *Id*.

Further, Washington proposes a number of DST planning and construction milestones. ³¹⁷ As a new DST "requires significant up-front efforts, including site selection, design, permitting, and safety basis development," Washington includes "a set of four milestones that attempt to minimize significant retrieval delays caused by the DST construction timeframe." ³¹⁸

First, Washington proposes that DOE submit a detailed project plan and schedule for commissioning two million gallons of DST volume by September 30, 2016. 319 Second, DOE must submit a RCRA/Dangerous Waste Permit modification request by September 30, 2018. 320 Third, DOE must complete the design for two million gallons of DST volume by June 30, 2019. 321 Fourth, if a triggering event occurs, DOE must complete construction of new DSTs either within four years of the triggering event, or of completing the aforementioned design milestones, whichever is later. 322

³¹⁷ *Id.* at 27.

³¹⁸ *Id*.

³¹⁹ *Id.* at 28.

³²⁰ *Id*.

³²¹ *Id*.

³²² *Id*.

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Washington contends that DOE's proposal "virtually guarantee[s] no new DSTs will ever be built."323 Further, Washington asserts that DOE "has submitted a new report, prepared specifically for this litigation, that significantly reduces its prior projections with respect to the amount of DST space necessary to complete Consent Decree retrievals." 324 Washington argues that, as the "ever-shifting nature of Energy's own numbers and assumptions . . . demonstrate[s] the inexact nature of such projections," "[t]he Court should not accept Energy's current reduced numbers as the basis for Evaporator targets."325 Washington proposes Evaporator waste volume reduction targets with more than the "minimal buffer" provided by DOE. 326

3. Analysis

a. Contingent Double-Shell Tank Trigger

As noted in the Court's prior order, the Amended Consent Decree will mandate that certain SST retrieval milestones constitute a condition precedent which, if triggered, would require DOE to construct additional DST storage space. 327 Any such trigger must be "suitably tailored to resolve the problems

³²³ ECF No. 208 at 14.

³²⁴ *Id.* at 18.

³²⁵ *Id.* at 18–19.

³²⁶ ECF No. 208-2 at 9.

³²⁷ ECF No. 170 at 27.

created by the changed . . . conditions."³²⁸ The "changed conditions" identified by the Court have resulted in substantial delay of SST retrievals, so much so that "the current Consent Decree milestone schedule [is] unworkable [or] substantially more onerous."³²⁹

For a contingent DST to be "suitably tailored," the appropriate triggering condition must occur when DOE's noncompliance with the Consent Decree schedule has resulted in a delay that cannot be mitigated. Should DOE fail to complete the mandated five SST retrievals required by Milestone B-3 by December 31, 2020, Washington may petition the Court to mandate the beginning of construction of additional DST storage capacity. The parties will have an opportunity to brief the issue on an expedited basis, and the Court will give serious consideration to Washington's request.

Although the Court previously had indicated that Evaporator effectiveness may serve as a triggering condition, ³³⁰ the Court finds that utilizing Milestone B-3 as a trigger is more "suitably tailored" as (1) Milestone B-3 is directly connected to the primary Consent Decree purpose of retrieving the remaining SSTs and (2) the 242-A Evaporator must be effectively utilized in order for DOE to satisfy Milestone B-3, which means that the effectiveness of the 242-A Evaporator

³²⁸ Labor/Cmty. Strategy Ctr., 564 F.3d at 1120.

³²⁹ ECF No. 170 at 6–7.

³³⁰ *Id.* at 32.

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campaigns are incorporated as a necessary element of Milestone B-3.

The Court declines to adopt Washington's proposal to mandate preconstruction design and permitting work on contingent DSTs until there is evidence that DOE will be unable to meet Milestone B-3. The Court finds that compelling DOE to expend limited resources preparing for projects that may not be needed would not be a "suitably tailored" modification.

b. Mandated Purchase of 242-A Evaporator Reboiler

As discussed above, Washington has raised concerns about the effectiveness and durability of the 242-A Evaporator. ³³¹ DOE has acknowledged that the 242-A Evaporator is essential to retrieval operations: DOE must create "additional storage space for waste retrieved from single-shell tanks." ³³²

DOE has submitted a report titled Capability of the 242-A Evaporator to Support A and AX Retrieval. 333 The report noted that "[h]ypothetical outage

³³¹ ECF No. 198 at 24.

³³² ECF No. 196-3 at 12; *see also id.* at 62 (noting that the 242-A Evaporator must operate at a minimum "approximately 14% of the 152 days per calendar year . . . to complete the next nine A and AX SST retrievals").

³³³ ECF No. 196-3 Ex. C.

scenarios . . . show that retrieval dates can still be met in the event of reasonable contingencies such as an 18-month 242-A Evaporator outage."³³⁴

The report specifically discussed a critical facet of the 242-A Evaporator, the E-A-1 reboiler. ³³⁵ The report provided the following analysis of the E-A-1 reboiler: "[a]s the reboiler is a critical piece of equipment, there is a risk of delay to the [Tank Operator Contractor] mission if the existing reboiler fails." ³³⁶ Specification, procurement, and replacement of a safety-significant E-A-1 reboiler is expected to take greater than two years. ³³⁷ Procurement of a qualified spare reboiler would reduce the risk to the retrieval mission by reducing the replacement time to approximately one year, which is consistent with the duration of previous unplanned outages due to equipment breakdown. ³³⁸

As the report notes, "[r]ecovery from a failure of the reboiler would likely take longer than the hypothetical 18-month outage if a spare is not available, and significantly shorter than the outage if a spare is available." The report

³³⁴ *Id.* at 62; *see also id.* at 82 (detailing hypothetical outage scenarios for eighteen month periods).

³³⁵ *Id.* at 85–86.

³³⁶ *Id.* at 86.

³³⁷ *Id*.

³³⁸ *Id*.

³³⁹ *Id.* at 83.

concluded by recommending that "the procurement of a qualified spare E-A-1 reboiler would lower mission risk by reducing the reboiler replacement time from greater than two years to approximately one year."³⁴⁰

DOE "has been actively identifying and procuring spare parts for the 242-A Evaporator, including possible procurement of a spare reboiler."³⁴¹ If the reboiler fails without an available replacement, the 242-A Evaporator would be out-of-service for a minimum of two years.³⁴² As the longest outage scenario analyzed by DOE was eighteen months,³⁴³ it is unclear whether a two year outage would significantly affect or derail DOE's ultimate goal of retrieving the remaining SSTs by 2024.

If the current reboiler should fail without a spare, the overall project would be further delayed, potentially beyond the current milestone deadline of March 31, 2024. Therefore, the Court finds that mandating an immediate reboiler purchase would be "suitably tailored" to mitigate the delay caused by DOE's past noncompliance and any future ineffectiveness of the Evaporator. Considering the potential detrimental consequences of a failed reboiler to accomplishing the Consent Decree primary goal of SST retrieval, the Court has modified the Consent

³⁴⁰ *Id.* at 86.

³⁴¹ *Id.* at 83.

³⁴² See id.

³⁴³ *See id.* at 82.

³⁴⁴ *See id.* at 83.

³⁴⁵ ECF No. 170 at 4–5.

Decree to require DOE to purchase a spare E-A-1 reboiler for the 242-A Evaporator by December 31, 2016.

Further, purchase of a spare reboiler is "suitably tailored" to holding DOE accountable to the modified retrieval schedule. Having a spare reboiler available, as opposed to procuring a replacement if and when required, will result in a speedier resumption of 242-A Evaporator operations should the current reboiler malfunction or fail. As the evidence presented supports the conclusion that a failed reboiler would be the most disastrous 242-A Evaporator scenario envisioned by DOE, modifying the Consent Decree to mandate the purchase of a replacement should assuage Washington's concerns about the 242-A Evaporator. Finally, as DOE indicates that the Tank Operator Contractor is currently actively considering the procurement of a spare reboiler, ³⁴⁴ the Court finds that modifying the Consent Decree to mandate the purchase will not be onerous or unattainable.

III. REPORTING REQUIREMENTS

The Court previously found that "holding DOE accountable by requiring reporting on DOE's progress or delays" is a "primary goal" of the Consent Decree. 345 The Court noted that "the extent of DOE's noncompliance with the Consent Decree . . . demonstrate[s] that the reporting requirements contained in the

Consent Decree are insufficient to achieve the third objective of holding DOE accountable."346 As the Court summarized:

[t]he Consent Decree contained three reporting requirements. First, DOE is required to submit to Washington semi-annual reports "documenting WTP construction and startup activities and tank retrieval activities that occurred during the period covered by the report." ECF No. 59 § IV(C)(1). Second, DOE must submit to Washington monthly reports, approximating ten to fifteen pages in length, documenting "the cost and schedule performance . . . for each major activity," "significant accomplishments during the prior month," and "significant planned activities for the next month." ECF No. 59 § IV(C)(2). Third, DOE must notify Washington "in a timely manner" if DOE "determines that a serious risk has arisen that DOE may be unable to meet a schedule" or milestone. ECF No. 59 § IV(C)(3). 347

The Court found that "[a]dditional reporting requirements regarding DOE's progress toward completing those milestones, as well as explaining why DOE cannot meet a certain milestone and how it is remedying the delay, are important means of holding DOE accountable to its obligations."³⁴⁸

A. DOE Reporting Proposal

DOE proposes the following accountability measures: "First, DOE will file annual reports describing DOE's compliance with the Consent Decree. Second, DOE will provide more detailed reporting if there is a 'serious risk' that DOE will not meet a milestone. Third, DOE will provide a comprehensive analysis and

³⁴⁶ *Id.* at 7.

³⁴⁷ *Id.* at 28.

³⁴⁸ *Id.* at 32.

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regular briefings regarding technical issue resolution."³⁴⁹ DOE argues that, as the WTP-related delay arises solely from the unresolved technical issues, additional burdensome accountability measures are not warranted.³⁵⁰ DOE contends that its proposed "measures are suitably tailored because they support judicial enforceability of the Decree, bolster the information available to the State when issues arise that may impede the project, and apprise the State of developments and operational decisions regarding the current issues impeding the project."³⁵¹

DOE argues that a quarterly reporting requirement, as proposed by Washington, "would drain resources and inject the State, and the Court, into operational judgments without regard to whether they bear on DOE's ultimate compliance with the milestones." Further, DOE objects to any "recovery plan" mechanism as it may take a great deal of time "to develop a scientifically-sound and thorough proposal." 353

³⁴⁹ ECF No. 196 at 20.

 $^{^{350}}$ *Id.* at 23.

 $^{^{351}}$ *Id.* at 24.

³⁵² ECF No. 209 at 18.

³⁵³ *Id.* at 19.

B. Washington Reporting Proposal

Washington proposes that DOE "submit quarterly status reports to the Court, with a copy to the State." Washington asserts that "[f]iling quarterly reports with the Court will encourage greater candor and accountability on Energy's part." Washington also requests that the reports include a greater level of detail than was mandated by the original Consent Decree, as well as "the opportunity to formally, through the Court, seek clarification or further information related to the quarterly reports." 356

Further, Washington proposes an enhanced reporting requirement when a scheduling milestone is at risk. ³⁵⁷ This enhanced provision would require notification to the Court and compel DOE to provide a detailed account of the situation. ³⁵⁸ DOE also would be required to provide a recovery plan within forty-five days of any risk notification. ³⁵⁹

³⁵⁴ ECF No. 198 at 30.

³⁵⁵ *Id*.

³⁵⁶ *Id.* at 31.

³⁵⁷ *Id*.

³⁵⁸ *Id.* at 32.

³⁵⁹ *Id*.

³⁶⁰ ECF No. 208 at 20.

³⁶¹ See ECF No. 167 at 102.

Washington objects that DOE's reporting provisions are "limited [and] vague" and "commit [DOE] to very little and promise no enhanced accountability over the current Decree." 360

C. Analysis

The instant litigation did not arise, as DOE asserts, solely as a result of unresolved technical issues delaying WTP development and construction. As asserted by Washington, a primary grievance was DOE's lack of transparency concerning the delay in both WTP development as well as SST retrieval. As noted by Washington

The events of the past four years show that the current terms of the decree aren't sufficient to ensure that kind of accountability. Energy's early reporting under the decree gave no hint at the magnitude of the schedule trouble that was on the horizon

[Ecology] did get our first at-risk notice [in November 2011]. It said: The Department of Energy has determined that a serious risk has arisen that DOE may be unable to meet one or more of the schedules as required in Section IV of the Consent Decree.

We made repeated requests for more information, but Energy refused to disclose more information unless we agreed the information would be subject to ER 408, treated as an offer and compromise. It took us six months to simply confirm what milestones were at risk after their 2011 notice.

We also made repeated requests for Energy to explain what it was doing to try to stay in compliance with the decree or stay as close as possible to the decree's schedule, but as we know, in 2012 Energy gave unilateral direction to its contractor to first re-baseline the project, not to fit the CD schedule . . . but its own funding profile, and then to

stop design and construction of the waste treatment plant, at least at the pretreatment and high-level waste facilities. ³⁶²

While the various technical issues may have caused the delay, DOE has no excuse for its total lack of transparency concerning the resolution process. It is possible that if DOE had reported issues to Washington and Oregon, such as funding inadequacies, the parties could have jointly lobbied Congress for needed funds to resolve the problem. By not reporting to Washington and Oregon, DOE lost the power and influence of two valuable political partners, and the parties were denied the opportunity of working together for the good of the public and the environment. Therefore, the Court will mandate enhanced reporting requirements in order to encourage cooperation between the parties.

The Court will modify the Consent Decree to include more detailed and stringent reporting requirements that are "suitably tailored" to hold DOE accountable, especially in a situation where DOE has chosen to operate unilaterally and in violation of the original Consent Decree to which DOE had voluntarily agreed.

1. Quarterly and Monthly Reporting

The Court finds that a combination of the monthly reports currently mandated by Section IV(C)(2) and more detailed quarterly reports under Section IV(C)(1) will be sufficient to ensure accountability concerning progress and delay.

 $^{^{362}}$ *Id.* at 102–03.

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The substance of the reports largely will remain the same, with the exception of two new requirements: a description of progress made towards resolving the outstanding technical issues and an accounting of total labor expended on SST retrieval, including an exact calculation of hours using SCBA and a calculation of any detrimental effect that SCBA use had on retrieval operations. These additional reporting requirements serve to track the two variables that, according to DOE, principally contribute to the uncertainty regarding the remaining Consent Decree schedules. The increased reporting also will serve to inform any later determination of whether these variables constitute "good cause" for a schedule amendment under Section VII(D).

The Court will not require that either the quarterly or monthly report be provided to the Court, which would make the document a public record. As noted above, the Consent Decree was a cooperative agreement that DOE and Washington drafted and voluntarily agreed to in order to achieve a common goal. Somewhere in the past five years litigation concerns have been inserted, which have forced the parties into the instant dispute. The Consent Decree has been misconstrued as a Complaint, and the agreed upon reporting requirements attempted to be blocked by Federal Rule of Evidence 408.

The Court encourages the parties to return to the cooperative nature of a consent decree and avoid introducing litigious barriers to cooperation and communication. The Consent Decree was negotiated and entered into by the

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governmental entities who are entrusted with protecting the public interest and welfare. In an attempt to encourage open communication and cooperation between the knowledgeable persons at DOE and Washington without litigation filters inserted by counsel, the Court only will be involved when the parties absolutely require the Court's services, which will occur only when the parties have failed to follow through on their previously agreed obligations.

In consideration of Washington's concerns about DOE's past noncompliance with Consent Decree reporting requirements, the Court will allow Washington to petition the Court for an expedited hearing if Washington has good cause to allege that DOE has not been forthcoming or has omitted essential details from either the quarterly or monthly reports.

Upon a finding of good cause after such a petition is filed, the Court will immediately convene a hearing, during which DOE personnel will explain any discrepancies and address Washington's allegations as well as the Court's concerns. Any such hearing will be in open court with a public record open to public scrutiny.

2. Serious Risk Reporting

As noted above, the Court finds that the previous serious risk reporting requirement contained in Section IV(C)(3) was woefully ineffective in achieving accountability. Therefore, the Court will implement the following enhanced reporting procedure: (1) if DOE becomes aware of a serious risk of failing to

satisfy a Section IV scheduling milestone, DOE must notify Washington within fourteen days of receiving notice of that risk and provide a preliminary report to Washington addressing the issue; (2) Washington may request a meeting with DOE within thirty days of receiving notice of the potential failure to satisfy a Section IV scheduling milestone to cooperatively address solutions and mitigation options concerning the serious risk; and (3) if Washington has good cause to allege that DOE has not been forthcoming, either in the initial report or at the meeting, Washington may petition the Court for an expedited hearing, during which DOE will explain any discrepancy and address Washington's concerns. Any such hearing will be held in open court and subject to public scrutiny. DOE will keep Washington informed concerning any serious risks, either through compliance with the Amended Consent Decree or in open court.

3. Applicability of Federal Rule of Evidence 408

During oral argument, Washington noted that "Energy refused to disclose more information unless we agreed the information would be subject to ER 408, treated as an offer and compromise."363

The Court finds that any reporting requirements should not be subject to protection under Rule 408 because the reporting requirements are pursuant to the Consent Decree and do not constitute settlement offers. Instead, DOE will be

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³⁶³ *Id.* at 103.

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providing information as it agreed to in the Consent Decree and as required by mandatory Consent Decree terms. If DOE attempts to avoid its reporting requirements by invoking Rule 408 in the future, Washington may petition the Court for an expedited hearing during which the Court will resolve any issue arising out of the instant dispute in open court and on the record subject to public scrutiny.

The Court directs DOE to comply with all of the reporting requirements in the Amended Consent Decrees without restriction and in good faith. If Washington concludes that DOE has failed to fully and accurately comply with the modified reporting requirements, Washington may petition the Court, pursuant to the Amended Consent Decree, for a public, on-the-record hearing. If such a hearing is convened, DOE will appear, answer Washington's and the Court's questions, and be subject to examination.

IV. STATE OF OREGON CONSENT DECREE

In 2010, DOE and Oregon entered into a Consent Decree which contained reporting requirements identical to those in the Consent Decree between DOE and Washington. To increase accountability and oversight, Oregon requests that the Court modify the Consent Decree between DOE and Oregon to include new reporting requirements identical to those proposed by Washington above. The solution of the Consent Decree between DOE and Oregon to include new reporting requirements identical to those proposed by Washington above.

³⁶⁴ See ECF No. 60.

³⁶⁵ ECF No. 197.

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The Court will modify the Consent Decree between DOE and Oregon so that Oregon receives the same reports that DOE must transmit to Washington. These include the quarterly and monthly status reports as well as the "serious risk" reports as necessary. The Court finds that Federal Rule of Evidence 408 also will not apply to DOE's reporting requirements to Oregon because the reports are mandated by the Consent Decree. The Court finds that these increased reporting requirements are "suitably tailored" to hold DOE accountable and increase transparency concerning WTP construction and SST retrieval progress.

However, the Court will not modify the Consent Decree between DOE and Oregon to include the rights granted Washington to convene meetings and court hearings should DOE fail to comply with the reporting requirements. Instead, Oregon will be notified of any such meetings or hearings and be permitted to attend and participate if it so chooses. Oregon also may contact Washington concerning any issues arising from their shared reports to encourage Washington to invoke its rights under the Amended Consent Decree.

CONCLUSION

Concurrent with the entry of this Order, the Court will enter the two

Amended Consent Decrees, which contain amended sections superseding the

original 2010 Consent Decrees. The Court is aware that the current action involves

entering modified consent decrees and not resolving litigation in the ordinary

sense. Therefore, the Court will give the parties an opportunity to jointly stipulate to any amendments of the Court's modifications to the consent decrees.

DOE and Washington have thirty days from the entry of the Amended

Consent Decree to jointly stipulate to modifications of the Court's Amended

Consent Decree. DOE and Oregon have thirty days from the entry of their

Amended Consent Decree to jointly stipulate to modifications of the Court's

Amended Consent Decree. The Court will not entertain filings from a single party.

The parties must jointly agree and stipulate to any proposed amendments to the

Court's rulings.

The Court encourages the parties to depart from the current litigation posture and return in a cooperative fashion to the task at hand: cleaning up the radioactive waste at the Hanford Site.

Accordingly, **IT IS HEREBY ORDERED**:

- State of Washington's Petition to Amend Consent Decree, ECF No. 75,
 is GRANTED IN PART AND DENIED IN PART.
- 2. United States' Motion to Modify Consent Decree, **ECF No. 76**, is **GRANTED IN PART AND DENIED IN PART**.
- 3. State of Oregon's Motion to Modify Consent Decree, **ECF No. 99**, is **GRANTED IN PART AND DENIED IN PART**.

- 4. The Consent Decree between the State of Washington and the Department of Energy, ECF No. 59, is superseded as directed in the Amended Consent Decree, which will be entered pursuant to this Order.
- 5. DOE and Washington have thirty days in which to file any joint stipulation to modify the Court's Amended Consent Decree. If the parties so stipulate, the Court will enter a Second Amended Consent Decree reflecting the parties' agreement.
- 6. The Consent Decree between the State of Oregon and the Department of Energy, **ECF No. 60**, is superseded as directed in the Amended Consent Decree Between Defendants Secretary of Energy Steven Chu and the U.S. Department of Energy and Intervenor State of Oregon, which will be entered pursuant to this Order.
- 7. DOE and Oregon have thirty days in which to file any joint stipulation to modify the Court's Amended Consent Decree. If the parties so stipulate, the Court will enter a Second Amended Consent Decree reflecting the parties' agreement.

The District Court Clerk is directed to enter this Order, provide copies to counsel, and **close this case**.

DATED this 11th day of March 2016.

s/Rosanna Malouf Peterson

ROSANNA MALOUF PETERSON

United States District Judge